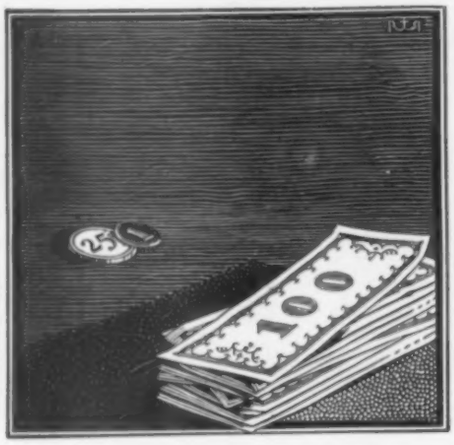
10¢ A COPY

The OIL WEEKLY

January 22, 1926 Volume 40. No. 5

Each 26 CENTS *brought* 100 DOLLARS *in sales!*



THE eastern branch house of a large packing company, anxious to increase its sales, decided to try the telephone. Fifty-six long distance calls were made, covering 7540 miles. Twenty-six orders were taken, totalling $29,760. Twelve of the sales were to regular customers, ten to occasional customers and four to prospects. The average telephone cost per hundred dollars was only twenty-six cents! Now Long Distance is a regular member of that sales force.

HUNDREDS of firms engaged in buying or selling goods are using Long Distance daily to increase business. Many regular customers buy more if they are given more opportunities. Many occasional customers are willing to buy regularly. Many prospects are merely waiting for a salesman to call them on the telephone and take their initial order. In addition to buying and selling, Long Distance accomplishes thousands of other services daily for business concerns and executives.

Has your firm ever made a test of what Long Distance can accomplish for your business? Do you let the telephone cover a greater territory for each one of your men? Are your salesmen trained to telephone to customers and prospects they cannot reach in person? Long Distance gets things done at a saving of time and travel. By its importance, a long distance call gets attention. By its obvious desire to serve, it builds good-will.

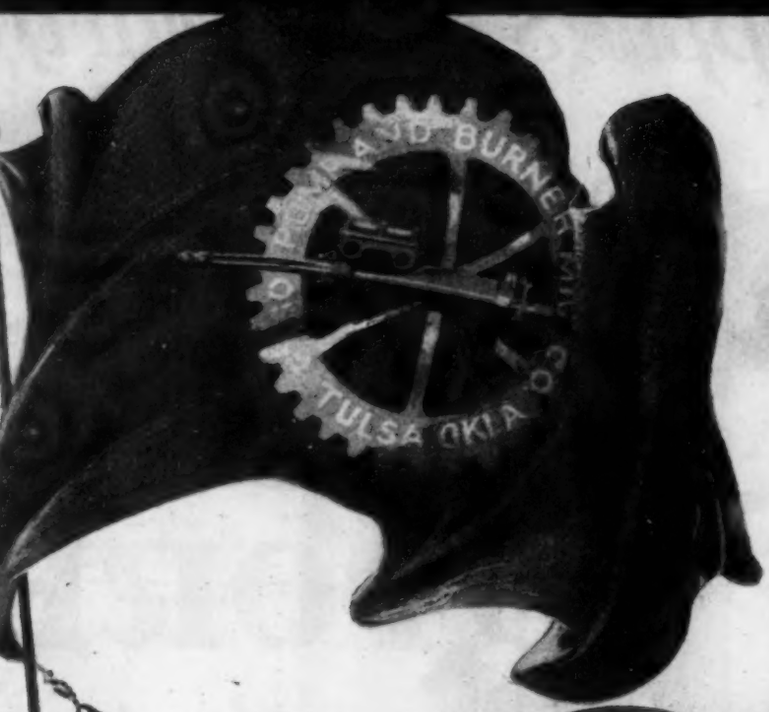
The Commercial Department of your local Bell company will make a survey of your business, free, and suggest many ways in which Long Distance can serve you. In the meantime, what man or concern a hundred or a thousand miles away would you like to talk to? The telephone on your desk will connect you, just as it does locally—now. . . . *Number, please?*

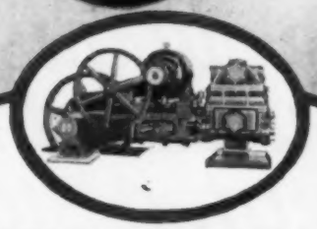
BELL LONG DISTANCE SERVICE

BELL SYSTEM
AMERICAN TELEPHONE & TELEGRAPH CO.
AND ASSOCIATED COMPANIES

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879

TOPPING the FIELD





FROM an humble beginning in 1915 to the important position in oil-industry pump manufacture that we now occupy, is remarkable progress—but we claim no special credit for it. The natural advantages we have to offer are so important that any one making an impartial investigation finds it simply impossible to make any other choice. Consider for yourself:

1—Central location, assuring promptest possible delivery of pumps and parts;
2—Specialization—one industry to serve, one line to manufacture;
3—A principle of *fewer* but *stronger* parts;
4—A system of checking and inspecting that makes "lemons" impossible.
5—A record of having supplied more than 8,000 dependably built and successfully operating pumping units.

Our new catalogue is now ready. Have you written for your copy?

GASO PUMP & BURNER MFG. CO
TULSA, OKLA.

GASO PUMPS
for every oil industry need

For your Oil & Gas Field Supplies, both Rotary & Cable

REPUBLIC SUPPLY STORES

are always ready to supply you from any of 25 conveniently located stores, each carrying complete stocks at all times

DISTRICT *HEADQUARTERS AND †STORES AT:

*HOUSTON, TEXAS
†Houston, Texas
†Corsicana, Texas (Mildred)
†Wortham, Texas

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†Wichita Falls, Texas
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*SHREVEPORT, La.
†Shreveport, La.
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*TULSA, OKLA.
†Tulsa, Okla.
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†Beggs, Okla.
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†Garber, Okla.

STOCKS AT ALL STORES INCLUDE:

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe. Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe and Casing.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

Jones' Acme Sucker Rods, and Gas Engines.

Broderick & Bascom's Wire Rope.

Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits and Hughes "Acme" Tool Joints.

Bovaird & Seyfang Oil Field Boilers.
Wall (Walk Laid) Bull Ropes and Manila Cables.
Rhodes Master Packing.

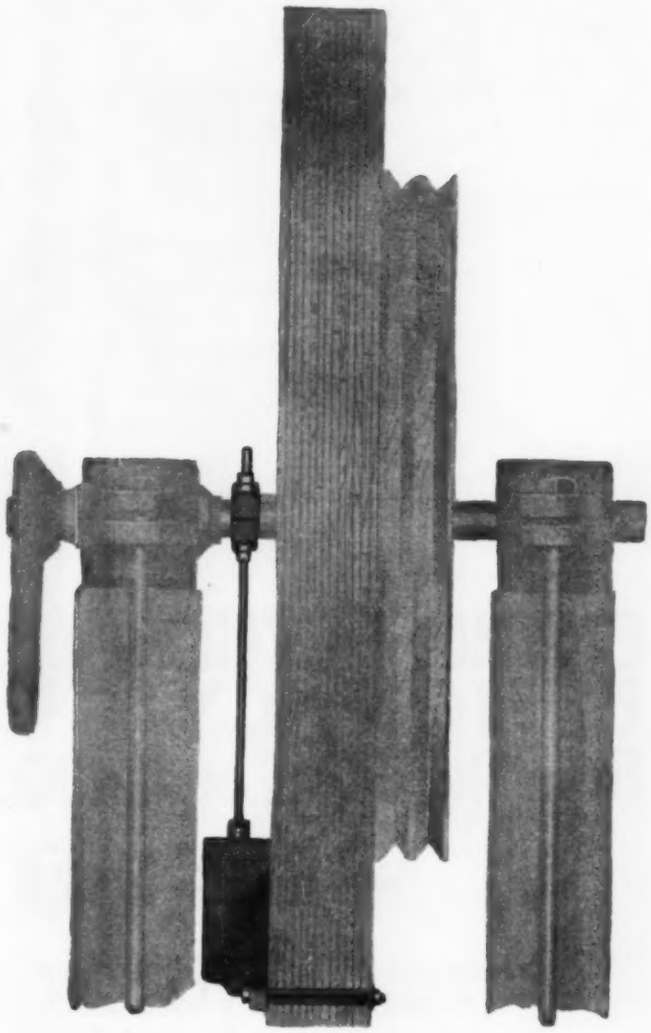
REPUBLIC SUPPLY CO.

Say you saw it in The OIL WEEKLY

Don't Counterbalance

Equalize

The O. C. S. Equalizer is a Bandwheel Counterbalance and it **Equalizes** the load on the belt and Equalizes the speed up and down of the rods.



Patent Pending

Think This Over

CALL YOUR SUPPLY STORE OR ASK US FOR FULL DETAILS HOW IT INCREASES PRODUCTION AND LOWERS POWER COST

Manufactured by

THE OIL COUNTRY SPECIALTIES MFG. CO.

Coffeyville, Kans.

Hillman-Cooney, Inc., Los Angeles, Cal., California Agents

Say you saw it in The OIL WEEKLY

ENTHUSIASTIC EFFICIENCY from The BOYS on the JOB

—Yes Sir!

the men who are doing the work and whose lives you are protecting and whose work you are making easier will sure appreciate the installation of the

LE BUS AUTOMATIC CATHEAD

They know it's the best and most efficient as well as quickest method of making and breaking.

LE BUS PATENTED OIL WELL TOOLS

LEBUS Automatic Cathead
LEBUS Slipsocket Overshot
LEBUS Eureka Tongs
LEBUS Breakdown Post
LEBUS Bottom Hole Plug
LEBUS Outside Drill Pipe Cutter
LEBUS Inside Pipe or Casing Cutter

AT YOUR DEALERS

Write for Particulars

MANUFACTURED BY THE

LE BUS ROTARY TOOL WORKS

ELECTRA, TEXAS

This is what happened to the cooking vat

on a Mid-Continent lease where Tret-O-Lite was given a trial. A like fate has since befallen the vats on the other leases of this producer.

Cut Oil is still being treated in some sections by the wasteful boiling process, which not only reduces the gravity of the oil many degrees but frequently consumes as fuel 15% of the oil recovered.

The Tret-O-Lite Process is conducted with very mild heat or none at all, does not reduce the gravity or volume of the oil, and recovers every particle of petroleum. Its actual performances proclaim it the one scientific and THOROUGH treating method.

Our field men are Tret-O-Lite experts, will recommend the type of installation, superintend its construction, and instruct your men in its operation. A personal call from the nearest one will not obligate you. Write us.

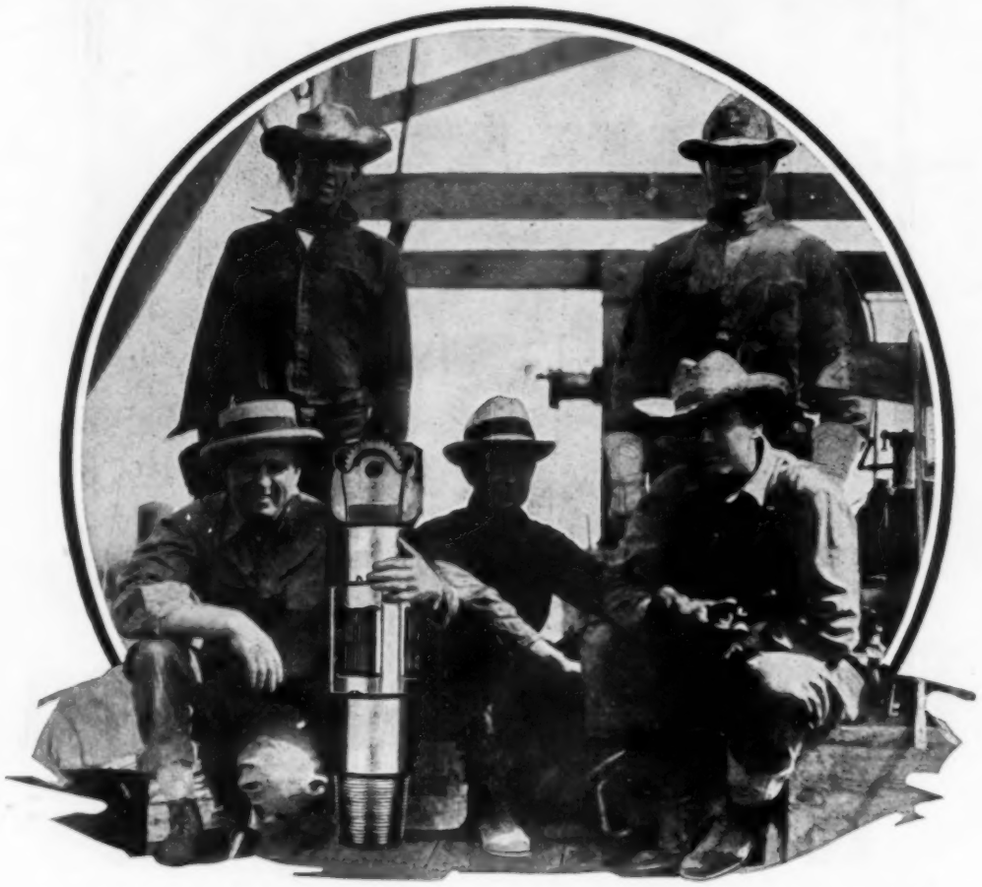
Process Patented

Wm. S. Barnickel & Company

St. Louis, Mo.
Offices and Plant: Webster Groves, St. Louis Co., Mo.

Tret-O-lite

Reg. U. S. Pat. Off.



Agathon Alloy Steel Bits Make Everybody Happy

The happiest fellows in the field are the roughnecks drilling with bits made of Agathon Alloy Steel. They wear smiles while the bits wear rock. And the bits keep on wearing rock and anything that comes in their way three times as long as bits made of ordinary steel. That means only one-third of the pullings for sharpening—one-third of the delays—and three times as much actual drilling in a given time. Doesn't that interest you? Then send for our Agathon Alloy Steel handbook and the help of our metallurgists. We furnish both without charge.

AGATHON STEELS

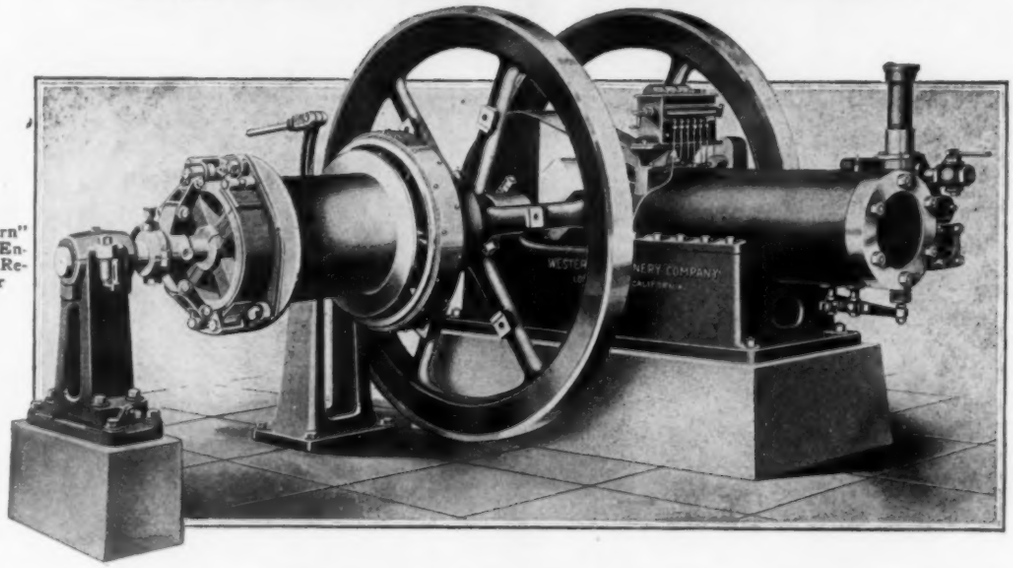
THE CENTRAL STEEL COMPANY, Massillon, Ohio

Swetland Bldg., Cleveland — Book Bldg., Detroit — Peoples Gas Bldg., Chicago
Aeolian Bldg., New York — University Block, Syracuse — Widener Bldg., Philadelphia
303 W. P. Story Bldg., Los Angeles, California

AGATHON ALLOY STEELS

WESTERN

Through the Fields with



The "Western" Oil Field Engine and Reverse Gear

Doing the Impossible?

Pumping deep wells efficiently and economically is a subject on which oil men have differed considerably. Many there were who believed it could not be done satisfactorily with gas engines. In the Signal Hill field, Long Beach, California, (shown below) this question has been definitely settled. The wells in this field range upward to 5500 feet in depth, and many of the deepest ones are equipped with "Western" Oil Field Pumping Engines, using gas for fuel, which have been operating over a sufficient period of time to produce definite records of operating and upkeep costs, and results. In many instances they are pumping the maximum quantity of oil twenty-four hours a day, month in and month out; providing all the flexibility and speed for cleaning out that can be obtained with steam plants; and all at greatly reduced costs. We will gladly furnish any interested company the records of these wells, which prove unquestionably that deep holes can be efficiently, economically, and satisfactorily pumped with "Western" Gas Engines.

The Signal Hill Field, Long Beach, California

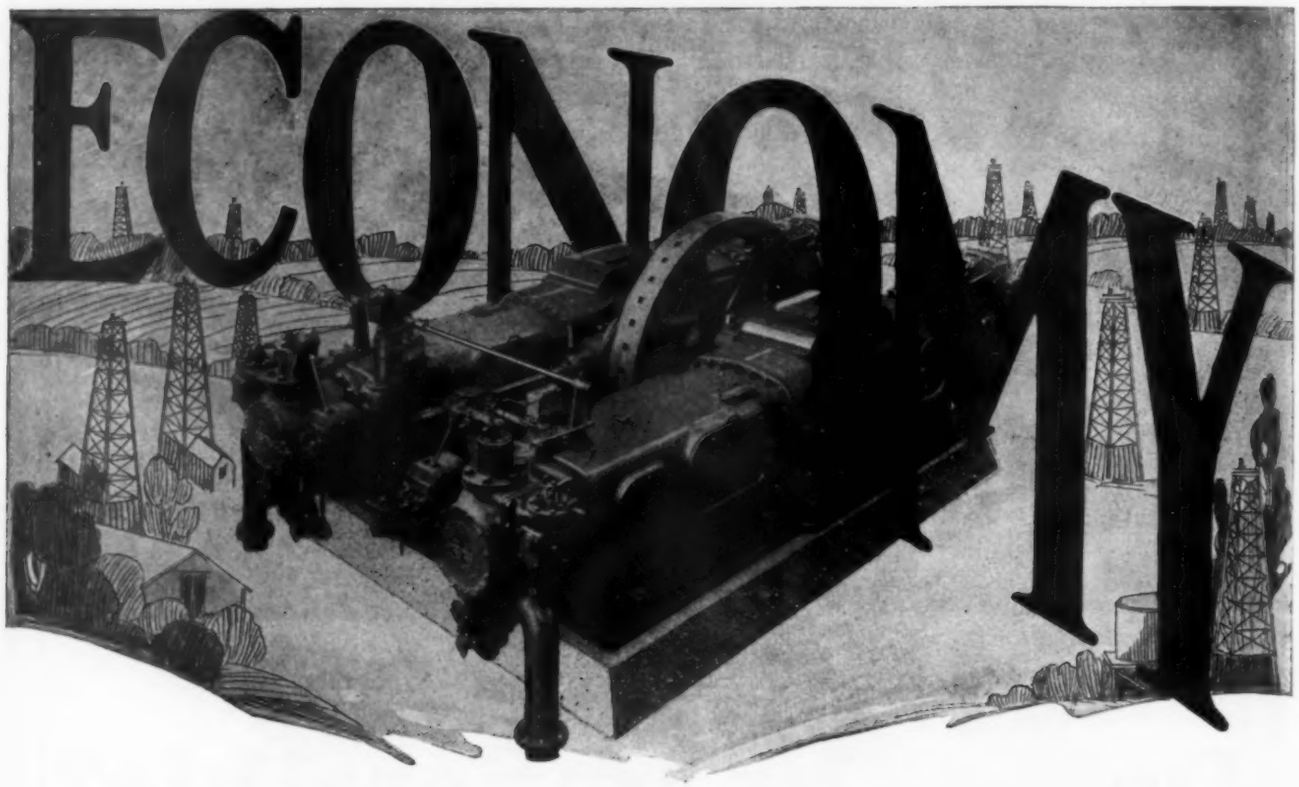
Western Machinery Company

General Offices and Factory: 905 North Main Street, Los Angeles, California

720 So. Kenosha St., Tulsa, Oklahoma

San Francisco Offices and Factory: Eighteenth and Alabama Streets

1106 Nineteenth St., Bakersfield, California



BESSEMER economy is threefold, paying greater dividends on your oil field power investment through their greater running time, lower upkeep cost and longer life.

Out in the oil fields, in gasoline plants, in pumping stations and in refineries thousands of Bessemers are proving our statement that "they soon pay their purchase price."

You will get the most out of your oil field equipment dollar by standardizing on Bessemers.

they Say—

"It doesn't owe me a cent"

THE BESSEMER GAS ENGINE CO.
62 York Street ∴ ∴ Grove City, Pa.

BESSEMER

BESSEMER OIL FIELD ENGINES — COMPRESSORS—VACUUM PUMPS—ROLLER PUMPING POWERS

GETTING "AROUND"

HOIST

means just this—that you are getting a superior block that will **absolutely** stand the strain of heavy rig work. The hand chain guide prevents "gagging and sticking," eliminating petty annoyance and increasing speed and efficiency

Spur-Geared Chain Hoist—1 Ton Lift

Screw-Geared Chain Hoist—1 Ton Lift

CONTINENTAL

Say you saw it in The OIL WEEKLY

No Threads

To Worry About!
No Pins to Break!!

This new Sucker Rod has no threads or machining on the rod itself . . . . . .

The threads on the sleeve are in compression —and not in tension . . . . . .

Made of Alloy steel and heat treated . .

Easy to install..

Designed by engineers to stand deep well pumping . . . . . .

SO MANY NAMES for this new sucker rod were received in our Name Contest, which closed Dec. 31, 1925, that we are unable to announce the winner in this issue.

Columbus Sucker Rods

Write us for any further information

The Columbus Sucker Rod Company
COLUMBUS, OHIO

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT
FUEL OIL
LUBRICATING OILS
CYLINDER
ENGINE
CORDAGE

Red and Pale Paraffine Oils

General Sales Offices: PITTSBURGH, PA.

District Sales Offices:
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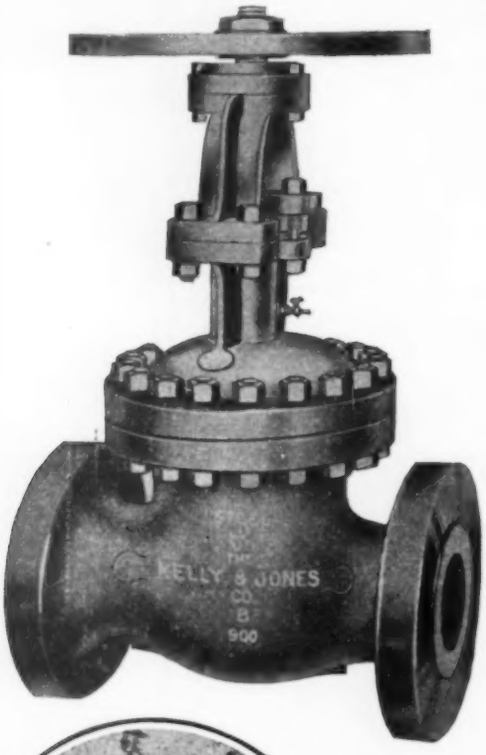
Providence, R. I.
Jacksonville, Fla.
Charleston, S. C.

Electric Steel Valves



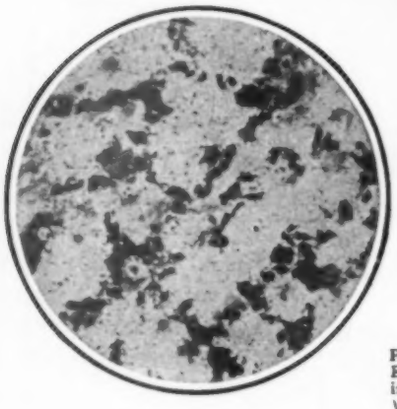


Photo-micrograph of Electric Steel used in all K & J Steel Valves.

A Material That Marks a Forward Step In Valve Construction

The material in any valve determines to a large extent its life and service.

The fine grain metal, as shown in the photo-micrograph, comes from the electric furnace and possesses great strength, ductility and uniformity. The steel is clean and the grain structure well broken up by the annealing process. Electric steel means longer life, fewer repairs and replacements, less shut down time and lower power costs.

For high temperatures and pressures, every experienced engineer will specify and insist upon electric steel valves. To be sure, look for the K & J monogram and the words ELECTRIC STEEL. Made in all sizes for 250, 400, 600 and 900 pound steam working pressures and temperatures to 750° F.

Power Plant Piping, Coils and Headers of all kinds made at our Etna plant, Sharpsburg, Pa. Write for booklet.

THE KELLY & JONES CO.

OWNED BY WALWORTH COMPANY

WORKS - GREENSBURG, PENNA.

REED ROCK BITS

A Tool of Many Purposes

The Reed Rock Bit is not only a Fast, Sturdy, Economical Tool, for use in cutting hard formations.

It is the Perfect Reamer.

It may be used for reaming down hole after completing and before setting casing, thus eliminating any possibility of a stuck job in setting casing.

Reed Reamers may be built up in tandem, from a Bull Nose or Diamond Point to any size desired, and equipped with Smooth Rollers for rolling out collapsed casing.

While not so designed or sold, Reed Rock Bits have been used in a large number of instances in connection with whipstocking and cutting out through casing and making new hole, or for cutting up junk dropped in the hole, such as chain, fish tails, tools, etc.

Reed Roller Bit Company

NEW YORK HOUSTON LOS ANGELES

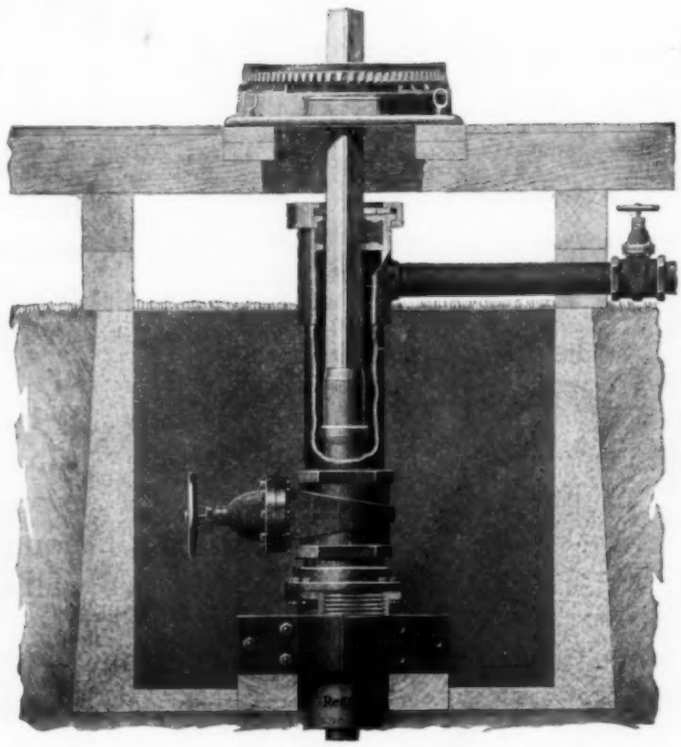
REED ROCK BITS

Designers and Manufacturers of Quality Oil Well Equipment

Tight Seal Around the Kelly

Regan Drilling Blowout Preventers

You can keep your well continually under perfect control while drilling by the installation of the Regan Drilling Blowout Preventer. You can doubly protect your well by installing the Regan Casing Control Head. The Drilling Blowout Preventer consists of a body, cap, closing rings and packing rings. The Packing Rings remain in the head while drilling and are continually at your service. Rings are so designed that the Kelly can be operated through them while in the head, and all that is necessary to bring about a pack-off is to raise the Kelly, bring the abutment at the bottom end of the Kelly against the packing rings which in turn causes a rubber ring to form a seal when under compression.



Hook-Up With Regan Control Head

Hundreds of oil producers are protecting their investment with these two dependable devices. You could not afford to be without them if you are drilling in any field where there is pressure. Send for descriptive catalog.

Regan

Forge & Engineering Co.

San Pedro

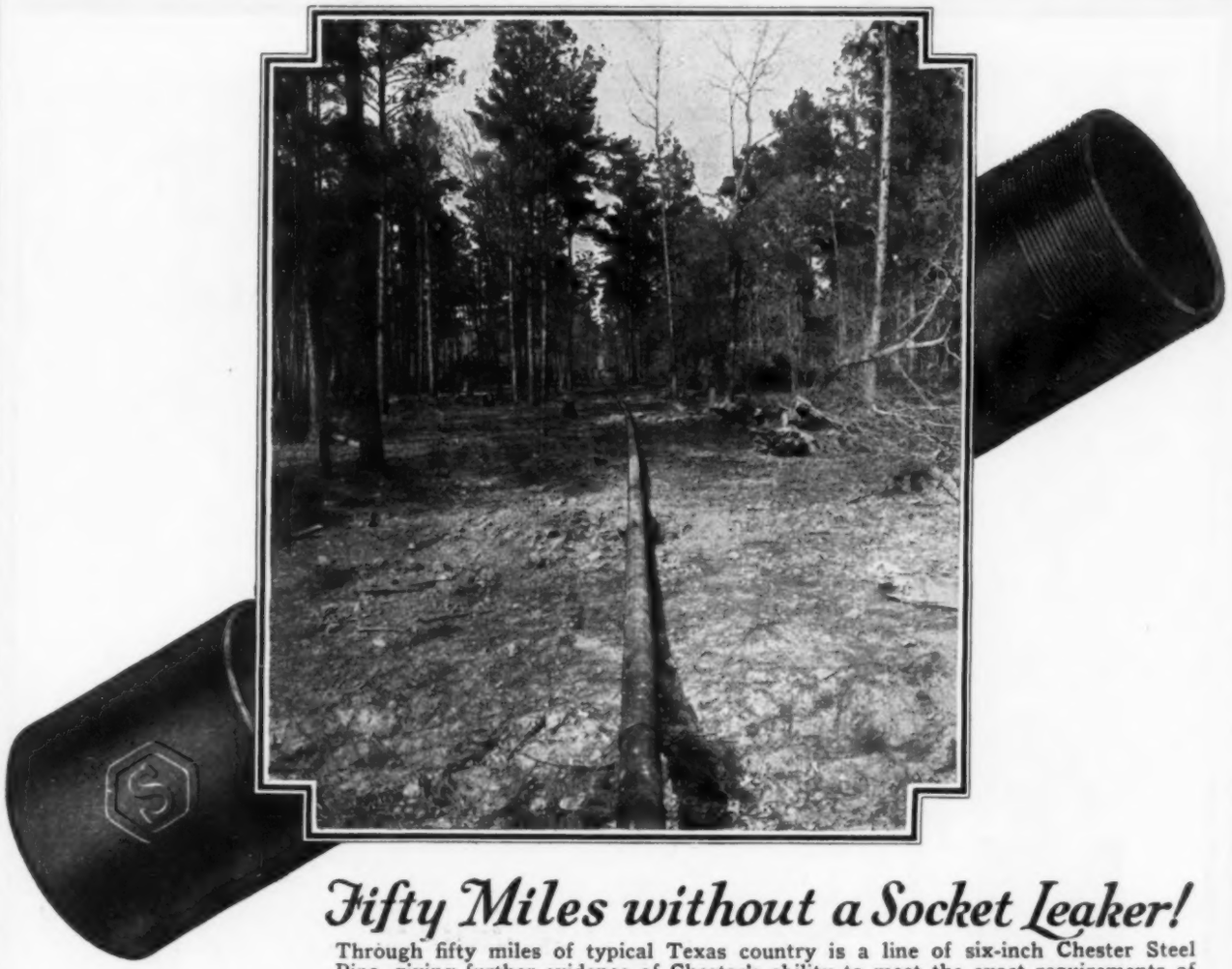
Wm. Braat, New York Manager,
Woolworth Building.

Quality
–Wrought on the Forge of Experience

California

Regan Sales Company
California Distributors

J. A. Becker, Mid-Continent Mgr.,
Tulsa, Okla.



Fifty Miles without a Socket Leaker!

Through fifty miles of typical Texas country is a line of six-inch Chester Steel Pipe, giving further evidence of Chester's ability to meet the exact requirements of oil field service.

Starting the pressure pumps Monday, on Tuesday the pressure registered 360 pounds. On Wednesday the pressure was increased to 380 pounds, and on Thursday it recorded 400 pounds. This pressure was maintained for nine days. It was then entirely released, and pressure to the extent of 590 pounds was quickly applied. A test covering the entire line showed not one leak. Every length of pipe and every joint was perfect.

This remarkable performance proves Chester's ability to withstand much more than is usually expected of pipe. Chester Steel Line Pipe and Casing are fabricated from the finest steel, processed by exclusive Chester methods, and are made especially for the oil fields. Our distributors carry in stock a complete range of sizes.

South Chester Tube Company

Chester, Penna.

Pittsburgh New York Tulsa Los Angeles

Also Makers of Wrought Iron Casing from 4½" to 12½"

DISTRIBUTORS

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Petroleum Supply Co., Houston, Texas
Hillman-Cooney, Inc., 1118 Santa Fe Ave., Los Angeles, Cal.
Wagner Supply Co., Fort Worth, Texas

WAREHOUSES AT

Houston, Texas; Thenard and Taft, Calif.

CHESTER

SPECIALISTS IN CASING FOR DEEP WELL DRILLING

STEEL CASING

Say you saw it in The OIL WEEKLY

The Standard Collapsible Rotary Drill and Core Barrel

have established an enviable record on the three following points:

EFFICIENCY
RELIABILITY
RAPID DRILLING

They have proved so efficient, reliable and saved so many thousands of dollars to those who have used them that our claims are now fully and cheerfully acknowledged by every one familiar with their performance.

Wouldn't it be economical to equip your drilling rigs with the Standard Collapsible Rotary Drills and Core Barrels?

Write For Descriptive Literature

O. M. CARTER

W. T. HILTPOLD, Sales Agent
206-7-8 Scanlan Bldg., HOUSTON, TEXAS

Most Power—Widest Range of Speed

POWER is built right into the Model 70 Winch from motor to drum. This winch is manufactured especially for oil field service by the Rock Island Plow Company, Rock Island, Illinois. It has such a wide range of speed that it will operate shallow wells rapidly and economically. It has the power to operate the deepest wells. It is guaranteed to pull 10,000 pounds on a direct line. Pulls rods and tubing from drum direct over crown block—eliminates bull wheels entirely. Sixteen pulling speeds—all the way from 100 to 450 feet per minute. Speed instantly varied while in action and operator always faces the work. Any road speed from one to ten miles per hour.

Large drum 18 inches diameter, twenty-eight inch face, spools 140 feet of 7/8 inch line without lapping. Two extra large brakes thirty inches diameter.

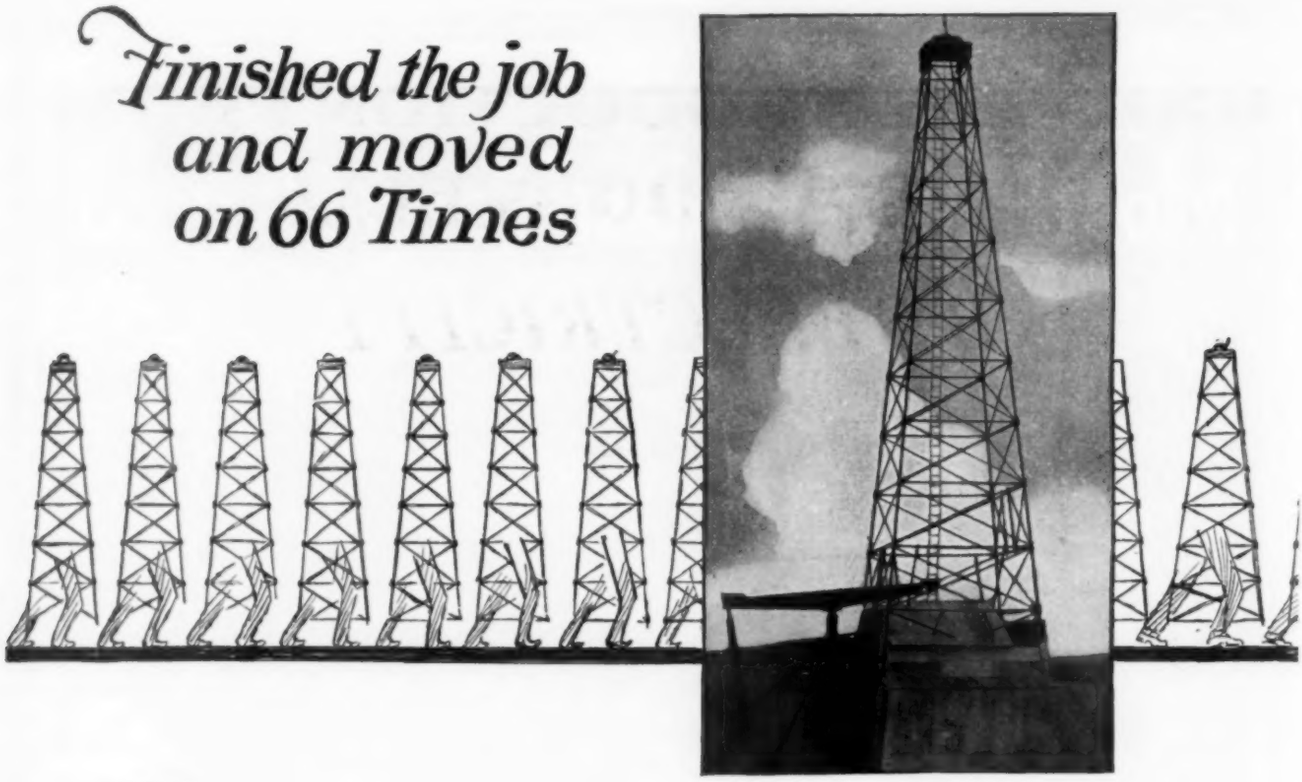
Heavy duty Waukesha motor with Ricardo head; Stromberg carburetor; Splitdorf high tension magneto with impulse starter.

Cut the cost of pulling rods and tubing and of pumping wells by using Rock Island Oil Field Equipment. Ask for free book describing it.

Rock Island
Model 70
Tractor Winch
Built Especially
FOR
Oil Field Service

C. F. CAMP COMPANY, Distributor
Corner Archer & Detroit, Tulsa, Oklahoma P. O. Box 289

Finished the job and moved on 66 Times



AT a total cost of $25 for repairs—a few bolts had to be replaced now and then—a Moore Derrick was kept in operation more than a dozen years and, when last heard from, was still going strong, with 66 completed wells to its credit.

It was estimated that the cost of wood derricks if they had been used to accomplish the same work, would have been at least $25,000. It is doubtful if any other than a Moore Derrick, of whatever material, has ever established such a record.

With a Moore Derrick, however, such performance is quite in character. The first Moore Derrick ever erected, eighteen years ago, is still in use at Mannington, W. Va. Long life and easy portability are built into every Moore Derrick and assured by known engineering facts as to design and material.

LEE C. MOORE & CO., Inc.
Oliver Building :: Pittsburgh, Pa.

CASPER, WYO.
Midwest Building

DALLAS, TEXAS
Magnolia Building

SHREVEPORT, LA.
414 Merchants Building

TULSA, OKLA.
Atlas Life Building

PARKERSBURG, W. VA.
Union Trust Building

Success!

Because of the success that users have enjoyed, Moore Derricks now in use far outnumber all other steel derricks combined. And wood derricks are fast becoming obsolete. Ask for literature.

MOORE TUBULAR STEEL DERRICKS

Say you saw it in The OIL WEEKLY

GREATER PRODUCTION FROM THESE 500 WELLS

BY ELECTRICITY

Actual use proves the value of anything from a cost and maintenance standpoint.

In 1920 one production company had 32 wells in two fields pumped by electricity. In 1925 the same company had over 500 wells in twelve fields over the Gulf Coast Section pumped by electricity.

Similar increases in the use of electricity for pumping made by other companies bear out the fact that electric pumping is cheaper—that it increases production—that it lowers maintenance costs.

Let our engineers show you how these companies have increased their production by using electricity and how you can do the same. There is no obligation. Just address a short communication to Lock Drawer 809, Beaumont, Texas.

EASTERN TEXAS ELECTRIC COMPANY
Beaumont, Texas

GULF STATES UTILITIES COMPANY
Orange, Texas

LOUISIANA ELECTRIC COMPANY, INC.
Lake Charles, La.

WESTERN PUBLIC SERVICE COMPANY
Liberty, Texas

Under the executive management of Stone & Webster, Inc.

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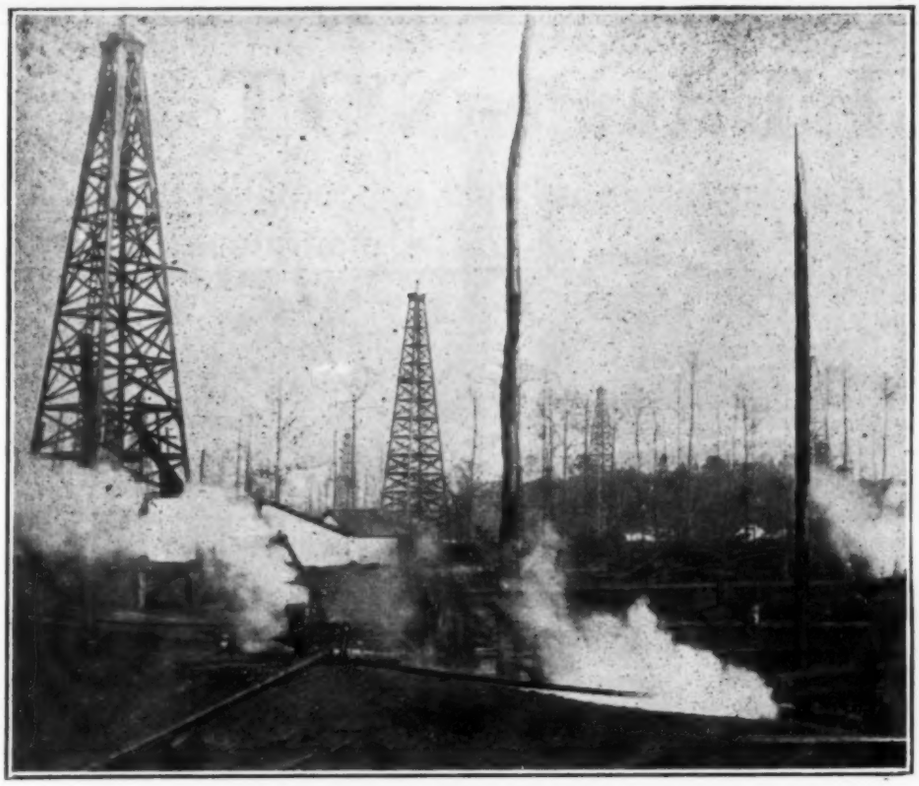

View in the Deep Sand Section at Smackover

The OIL WEEKLY

January 22, 1926 Volume 40, Number 5

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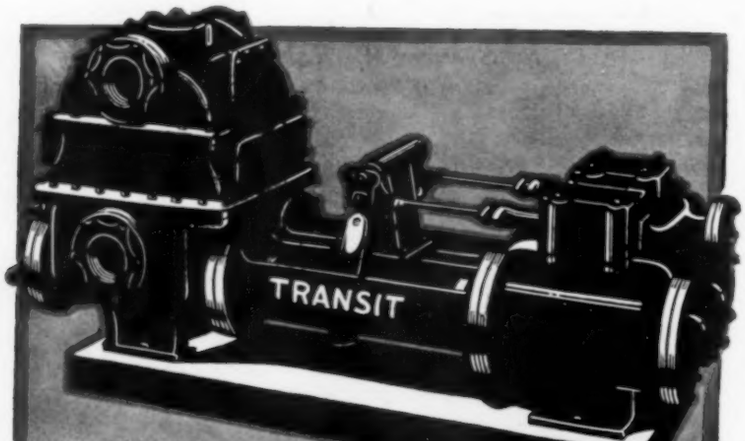
BUILT UP–NOT DOWN



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Say you saw it in The OIL WEEKLY

Los Angeles Meeting Makes Advance in Standardization

Committees expect to conclude greater part of recommendations to Institute

By Spencer W. Robinson
Editor of The Oil Weekly

Los Angeles, Calif.—Preliminary committee meetings held Monday in an effort to conclude reports and recommendations on the various subjects in which standardization is being sought were numerous and lengthy.

With the official opening of the sixth annual meeting of the American Petroleum Institute Tuesday morning, four committees were ready to submit definite recommendations for the consideration of the board of directors.

It was expected that even a greater part of the preliminary work on standardization, that of preparing specifications and recommendations, would reach its conclusion at this meeting. However, officials of the Institute are confident that the outcome of the Los Angeles gathering will see material advancement in the cause of standardization. Those committees which were unable to reach definite conclusions in their work have reached such stages of progress as to indicate that their work will be ready for the board's consideration at a subsequent meeting, probably to be held in the early summer.

The committee working on specifications for steel and iron pipe for oil country tubular goods finished its work some time ago and its recommendations were accepted by the board of directors at the meeting in Dallas last June. This committee has continued its research and will no doubt have some additional information to add to its report.

Rig Iron Report Ready

Rig Irons of A. P. I. specifications have been in use for several months and this committee has its reports and recommendations ready for the action of the directors. At the Monday pre-convention meeting of the committee on standardization of oil field boilers, the work of this group was brought to a close. Final recommendations are ready for consideration by the board.

Study on the item of sprockets under consideration by the committee on the standardization of rotary drilling equipment was completed Monday and if accepted by the directors will help complete work being done on dimensional standards for transmission for rotary drilling. These standards were also adopted at the Dallas meeting.

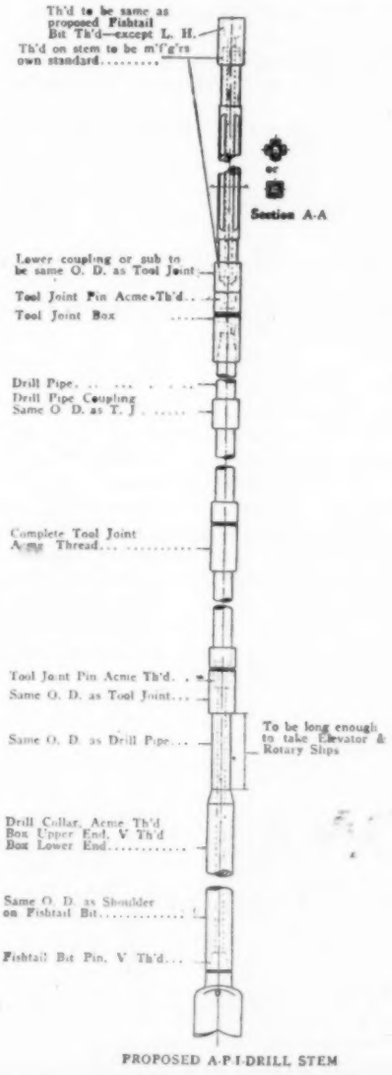
Tentative specifications and recommendations have been prepared by the committee on the standardization of wire rope and Manilla cordage and it is expected that these items will make their appearance in the field shortly following the Los Angeles meeting. The work of the wire rope and Manilla cordage committee is dependent to some extent upon other committees that yet have unfinished work and for this reason it has been impossible to reach any definite agreement.

The committee on testing methods and specifications held an important session Monday, at which the subject of the proper method of interpolation in the use of gravity correction tables was discussed at length. This committee held a subsequent meeting Tuesday but it is doubtful if there will be anything definite brought out at the later board meetings.

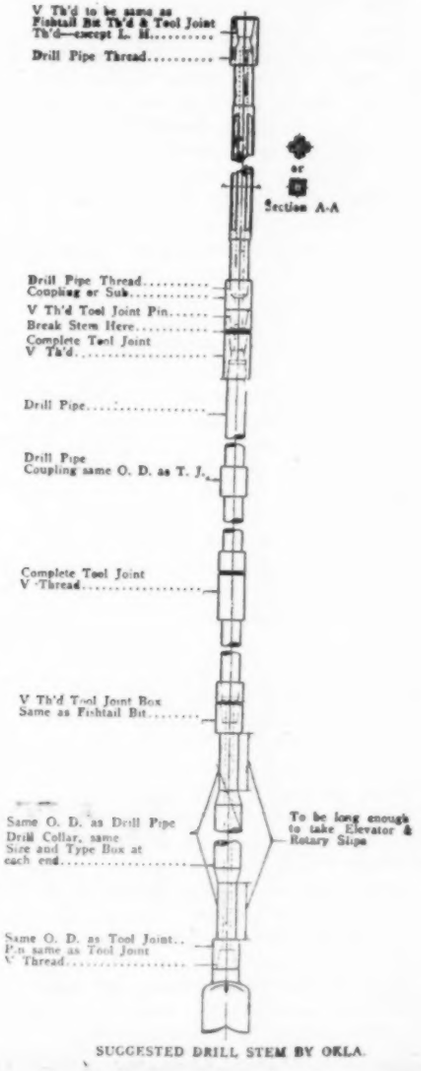
The special committee on method of testing vapor pressure met with Colonel Dunn, chief inspector of the Bureau of Explosives, to discuss possible methods of increasing safety in the transportation and handling of gasoline. This committee has much work ahead of it and will probably be unable to offer a complete report at this time.

Fire Prevention

The newly reoganized general committee on fire prevention held its first meeting to receive various reports of subcommittees and to plan its future activities. It was decided to make arrangements for a compilation of the current fire record of the industry along the lines of


Th'd to be same as proposed Fishtail Bit Th'd—except L. H.
Th'd on stem to be m'f'g'rs own standard
or
Section A-A
Lower coupling or sub to be same O. D. as Tool Joint
Tool Joint Pin Acme Th'd
Tool Joint Box
Drill Pipe
Drill Pipe Coupling Same O. D. as T. J.
Complete Tool Joint Acme Thread
Tool Joint Pin Acme Th'd.
Same O. D. as Tool Joint
Same O. D. as Drill Pipe
To be long enough to take Elevator & Rotary Slips
Drill Collar, Acme Th'd Box Upper End, V Th'd Box Lower End
Same O. D. as Shoulder on Fishtail Bit
Fishtail Bit Pin, V Th'd

PROPOSED A.P.I. DRILL STEM


V Th'd to be same as Fishtail Bit Th'd & Tool Joint Th'd—except L. H.
Drill Pipe Thread
or
Section A-A
Drill Pipe Thread
Coupling or Sub
V Th'd Tool Joint Pin
Break Stem Here
Complete Tool Joint V Th'd
Drill Pipe
Drill Pipe Coupling same O. D. as T. J.
Complete Tool Joint V Thread
V Th'd Tool Joint Box Same as Fishtail Bit
Same O. D. as Drill Pipe
Drill Collar, same Size and Type Box at each end
To be long enough to take Elevator & Rotary Slips
Same O. D. as Tool Joint
Pin same as Tool Joint V Thread

SUGGESTED DRILL STEM BY OKLA.

the 10 year record recently compiled by a special sub-committee.

The extent of the work involved will make it impossble for anything of definite value to be forthcoming at this time from the committees working on the standardization of standard rigs and derricks and rotary drilling equipment. The former committee held a well attended session Monday, but it was evident that considerable research would yet be necessary before any recommendations of standards could be compiled.

Tool Joints

The item of tool joints occupied by far the most important position in the Monday conferences of the commitee on the standardization of rotary drilling equipment. Much future work will no doubt be required to reach an equitable standard on this field item.

Oklahoma members of this committee were strong in their contentions for the flat V type thread on rotary tool joints, and many operators from other sections were also in favor of this type of joint. The proposed A. P. I. rotary tool joint is a modification of the Acme thread with several other new designs in taper, etc.

Reports were read by chairmen of the various sub-committees representing every operating section of the country. Letters from engineers discussing the relative merits of the two types of threads were introduced, and reports from those sections where A. P. I. joints have been in use were made.

After failing to reach an agreement Tuesday morning this committee made a trip to the Richfield field where an inspection was made of both types of joints in operation.

At the Dallas meeting certain members of the Oklahoma district agreed to test the proposed A. P. I. joint and it is expected that these tests will be continued for some time before a definite report can be made as to their practicability.

Institute Meeting at Los Angeles Has Record Attendance

Committee conferences and election of directors given attention in early sessions

By Wm. V. Gross
Staff Representative

Los Angeles, Calif.—The opening of the sixth annual meeting of the American Petroleum Institute in Los Angeles Tuesday was marked with the greatest attendance ever known for a gathering of that body. Registered and non-registered attendants from all parts of the world numbered close to 2000, literally jamming the lobby and main corridors of the Biltmore Hotel, convention headquarters.

Following disposal of preliminary matters and some of the questions before committee consideration which had remained unsettled after Monday's discussion, the board of directors for the ensuing year were nominated by the board of councillors at a meeting in the Biltmore ballroom.

Directors Elected

Those nominated by the board of councillors and subsequently elected at the general session, held later in the day, included the following: Frank Phillips of the Phillips Petroleum Company, Tulsa, was elected to serve with the Central United States Production group, while H. B. Earhart of the White Star Refining Company, Detroit, Michigan, was elected to serve with the Manufacturing Group of the same district. A. B. Macbeth of the Midway Gas Company, Los Angeles, California, was elected to serve on the natural gas group and George H. Jones of the Standard Oil Company of New Jersey, New York, and Wallace E. Pratt of the Humble Oil and Refining Company, Houston, were elected to serve on the "at large" group. W. C. Franklin of the Tidal Oil Company, Tulsa, Oklahoma, was elected a director on the Mid-Continent Production group.

Members of the board of directors re-elected at the general session to serve another term were: Mark L. Requa of San Francisco, California, Pacific Coast production group; J. D. Collette, O'Keefe and Collett, Fort Worth, Texas, J. Edgar Pew, Sun Oil Company, Dallas, Texas, both on the Central United States production group. J. C. Donnell, Ohio Oil Company, Findlay, Ohio, Eastern production group; E. W. Clark, Union Oil Company of California, Los Angeles, Pacific Coast manufacturing group; T. A. Dines, Midwest Refining Company, Denver, Colorado, Rocky Mountain manufacturing group; F. A. Pielsticker, Skelly Oil Company, Eldorado, Kansas, and P. M. Miskell, Empire Refineries, Incorporated, Tulsa, Oklahoma, Central United States manufacturing group; Charles Suhr, Pennzoil Oil Company, Oil City, Pennsylvania, Eastern United States manufacturing group; A. P. Coombs, Standard Oil Company of Ohio, Cleveland, Ohio, Eastern United States distribution group; H. E. Felton, Union Tank Car Company, New York, transportation group; D. E. Buchanan, Chestnut and Smith Corporation, Tulsa, Oklahoma, Natural gasoline (casinghead) group; Herbert L. Pratt, Standard Oil Company of New York, New York, Far East foreign trade group; E. L. Doheny, Pan American Petroleum Company, New York, Mexico and South America trade group; J. F. Lucey, Lucey Petroleum Company, Dallas; E. C. Lufkin, Texas Company, New York; Thomas A. O'Donnell, California Petroleum Corporation, Los Angeles; W. N. Davis, Mid-Continent Oil and Gas Association, Bartlesville; E. B. Reeser, Barnsdall Corporation, New York; H. F. Sinclair, Sinclair Consolidated Oil Corporation, New York; George S. Davidson, Gulf Oil Corporation, Pittsburgh, Pennsylvania; J. W. VanDyke, Atlantic Refining Company, Philadelphia, Pennsylvania; Henry L. Doherty, H. L. Doherty and Company, New York, all on the "at large" group.

Committee Meetings

Most of the morning Tuesday was taken up with committee meetings on the various phases of standardization, but when the delegates gathered in the large ball room of the hotel at 2:30 P. M. to hear the "Address of Welcome" by Thomas A. O'Donnell, California Petroleum Corporation, seats were at a premium with the result that many of the audience were forced to stand up to hear the cordial greeting tendered them. In addition to giving a hearty welcome, Mr. O'Donnell touched briefly on the outlook for the oil industry during the coming year, saying that present indications would seem to indicate a year of prosperity and tremendous strides in the various factors comprehended in the recovery, refining and marketing of petroleum and its products.

An address by Paul Shoup of the Southern Pacific Interests was to have followed that of Mr. O'Donnell, but this address was read, due to Mr. Shoup's presence in New York.

J. Edgar Pew, president of the

Seal Beach Definitely Proved As New Field

By Wm. V. Gross
Staff Representative

Los Angeles, Calif.—Apparent success finally has crowned repeated efforts of the Marland Oil Company of California to bring about a water shut-off in its Bixby No. 1 wildcat at Seal Beach, with the result that a new field has been opened for development.

January 15, a production test made at the well definitely proved that the water menace, which had been the waterloo of the Marland's predecessors in the exploitation of Seal Beach, had been overcome at 4833 feet after two failures at 4843 feet and 4838 feet, respectively. From 4830 to 4833 feet, the well is producing 500 barrels of 24 degrees Baume gravity oil, with 25 per cent emulsion and one per cent free water. This oil is flowing with a casing head pressure of 600 pounds, and it is coming through four one-half inch perforations in the three feet of exposed oil string.

Since the skepticism of operators regarding the possibility of effecting a water shut-off in the Seal Beach district has been wiped out, speculation as to whether or not Seal Beach will prove a southeast extension of Long Beach has begun. The Marland's well lies on a direct line between Long Beach and Huntington Beach fields, 790 feet west and 250 feet north of the south quarter of section 2, township 5 south, range 12 west. There has been no drilling between the Marland well and Long Beach field to disprove the theory that the new find will prove an extension of California's most active area. The deepest well drilled in the intervening space was that of the M. and M. Oil Company, which was carried down to 4342 feet, (nearly 500 feet above the sand in the Bixby well), and was abandoned as a dry hole.

The immediate vicinity of the Bixby well is covered by a mud flat, with a peak elevation of five feet above sea level, on the line dividing Los Angeles County and Orange County. For several years the region has been exploited by such companies as the Shell, the Associated, the Standard and the Seal Beach Oil Company, all of which have been unsuccessful so far as commercial production is concerned. The "mud flat", as it is called, was generally ill favored among geologists, the higher ground one-and-three-eighths miles to the southeast, where the Associated Oil Company of California abandoned its Hellman test at 5231 feet, having been given the preference.

In the course of past development at Seal Beach, the Shell Company drilled Bryant No. 1, five-eighths of a mile southeast of the Marland, to 4620 feet and got a production of 40 barrels of oil and 1700 barrels of water, which flowed under a strong gas pressure. The well has never been a commercial producer. About three-fourths of a mile east by south of the Marland location, the Shell drilled Bryant No. 2 to 5250 feet, where a rich oil sand was found. The operators were never able to do anything with the well on account of water intrusion. The well was drilled on down to 6139 feet without encountering anything encouraging. Bryant No. 3, another Shell test, continued negative in its showings from the time it was spudded in till a depth of 7222 feet was reached. The location of the third test is one mile east of the Marland wildcat. Bixby No. 1, a Standard Oil Compahy of California wildcat located a mile north by east of the Marland well, was dry at 5256, while the same company's Bixby No. 2, seven-eighths of a mile northeast by north of the new producer, was dry at 5610 feet.

While exploitation work at Long Beach is not characterized today by the ferver which manifested itself in that district a short while since, the bulk of California's drilling activity yet is centered around Long Beach, the northwest extension and the Los Cerritos extension. Boom activity has been prolonged there due to the unusually large proportions of the area under development and to the fact that the present producers are displaying remarkable consistency in yield for town-lot wells. For example, eight recent completions in the field had an average initial of about 480 barrels and now have an average settled output of 363 barrels, after two weeks of elapsed time. A majority of the Long Beach activity is in the Los Cerritos territory, a neighborhood which embraces 269 drilling wells, several of which are expected to be completed within the next week.

Long Beach field was again extended this week by completion of the McKeon Oil Company's Cerritos No. 1, a well located almost one-fourth mile north of previous production boundaries. The outcome of Cerritos No. 1 indicates the probability of a large increase soon in the amount of oil recovered from the Los Cerritos district, as the well is located in the midst of a district thick with derricks of operations gotten under way after the pioneer well had been drilling for some time. Cerritos No. 1 came in from 4405 feet for 400 barrels of 23 degrees Baume gravity oil. In addition to running 123 feet of six-and-one-fourth-inch liner, the operators set an eight-and-one-fourth-inch water string at 4322 feet.

A great deal of interest is displayed in the activities of James O'Donnell, a prominent operator and developer of the northwest extension, who is carrying exploitation work to the northwest and gradually getting closer to the Virginia Country Club lease, a 60-acre tract recently acquired by the Associated Oil Company for a consideration of $75,000. The lease, formerly held by the Shell, was released by that organization after it had drilled a test well to 6000 feet and obtained nothing to warrant further drilling. The Associated, however, does not consider the property condemned.

California Petroleum Corporation, one of the major operators in older Long Beach, has returned to the field's extension and started on a pretentious campaign, having commenced work on ten wells within the last few days.

Despite continued new producers, Long Beach leasing activity has experienced a lull recently, presumably due in the main to a wariness on the part of lease buyers with regard to the edge water situation. This situation is rather precarious at present, as it constitutes a possible obstacle to those active on properties forming the northwest, southeast and northern boundaries of the producing area.

Considerable interest has been aroused by the recent action of the Union Oil Company in starting a wildcat on the McNally property in the LaMirada district. The well, situated on what is seemingly a small structure two miles east of Santa Fe Springs, was staked out on a spot surrounded by previously drilled dry holes. To the northwest of the well, the Associated drilled a dry hole. To the north, and on the northwest corner of the same property, the Standard Oil Company of California drilled two dry holes, while on the northeast the Superior Oil Company drilled another dry hole. To the south, the Petroleum Products Syndicate made an unsuccessful attempt to get production. These wells were drilled to depths ranging from 5500 to 6050 feet.

American Petroleum Institute, spoke to the general session immediately following the welcome address. Mr. Pew touched on the growth of the Institute and its present status, as to membership, accomplishment and prestige. The president referred to the work of the Committee of Eleven, highly commending the services and spirit of the personnel of that group of men both to the American oil industry and to the people at large, ultimately. In closing, Mr. Pew thanked the convention for the honor it bestowed upon him in allowing him to serve it during the past year and gave the following thought with regard to the American Petroleum Institute during the coming year:

"This year should be one of harmony and of united effort within the Institute, and in the entire oil industry, that will result in establishing the business in the confidence of the public, as to its integrity and as to the soundness of the investments it offers."

Wildcatting Features New Work In Oklahoma

Only 58 new tests started during the week and most of them outside locations

By Roye Munsell
Staff Representative

Tulsa, Oklahoma.—New field work in Oklahoma was rather slow during the past week with only 58 tests started. Okmulgee County led with eight, and next in the order of number came Payne, seven; Creek, six; Osage and Stephens, five each; Kay, four; Kingfisher, Lincoln and Seminole, three each; Hughes, Okfuskee and Payne, two each; and Grady, Grant, Noble, Pottawatomie and Wagner, one each.

Wildcatting is apparently the feature of the new work. At least 12 of the first reports were on outside locations.

The new wildcat tests getting underway in Kingfisher County are not of a little importance. They are, seemingly, the aftermath of the rather intense lease play which has been going on there for some time, particularly in townships 15 and 16, range 6w, 15-5w, 13-8w and 16-9w.

The undeveloped country north of Tonkawa will get a test with the Mississippi Valley Oil Company's Barclay 1, NE NW 28-26-1w, two miles north of Tonkawa. The nearest outside location is the Tonkawa Development Company's 4000-foot Wilcox test, the McDaniels 1, two and one-half miles southeast in the SEc SE 15-25-1w, which is being drilled below 900 feet.

Announcement that the Braman Oil Company is to drill a twin well to the Herbert Oil Company's Community 1 well, SWc 5-28-1w, South Braman, created some interest. The new location will be 40 feet east of the Community 1 and is the Herbert 4.

Start Big Hole

The test will continue to 5000 feet if necessary and will be started with a 32-inch bit. No doubt, this is the first well in Oklahoma to be started with a 32-inch hole.

The three wells now producing on the Braman Townsite are the Davis Oil Company Horne 1, swabbing 65 barrels; H. H. Patton, School Yard 1, swabbing 35 barrels; and E. B. Shawver 1, swabbing 42 barrels of fluid, 17 of which are water.

The total daily production of the 38 producing wells in North and South Braman combined is 6784 barrels.

The big development of the past week was the discovery of another new producing area in Seminole County by Bryan, Emery & Nillson and the Carter Oil Company in their Sam Walker 1, SEc 4-7-6.

The sand, as yet unnamed, was found at 2752 feet and at about four feet in the hole began to fill up with an oil which tests 40.5 degrees Baume. When given a swabbing test the well flowed. At last reports it yielded around 150 barrels natural. It is yet to be drilled in.

The Sam Walker 1 is southwest of Wewoka and southeast of Maud. The nearest production is at Maud in township 8, range 5, Pottawatomie County, where the Magnolia Petroleum Company produces from the Hunton lime. Even if the Walker 1 does not make a big well, as wells go, it calls for future developments in that territory.

The records show that a direct south offset would be owned by Hudson and Whitehead who have the NE NE¼ 9-7-7; an east offset by the Empire Gas & Fuel Company which holds the W½ SW NE SW 3-7-6; a diagonal southeast offset by the Mid-Continent Petroleum Corporation which owns the N½ 10-7-6. The Prairie Oil & Gas Company hold the N½ SE 4-7-6.

The new Earlsboro well in Seminole County, NW SE 10-9-5e, owned by Morgan, Flynn and Wrightsman, is continuing to hold up in a good manner with around 200 barrels production natural from 3560 to 3570 feet. It will probably be deepened again. The Texas Company and the Independent Oil and Gas Company have announced offsets.

Garber Revives

Garber deep sand after dropping to 1900 barrels a day has been revived, temporarily at least, to more than 24,500 barrels of production daily. The gain was effected by a more skillful handling of the deep sand wells, intensive swabbing, plugging back and the occasional use of compressed air.

A most gratifying result of plugging back was the reduction of the water output of the Roxana Petroleum Corporation's Schroeder (West) 9 from 11,000 barrels daily and the immediate increase of the oil production from around 45 barrels to 1300 barrels.

Other results with the plug to shut off the encroaching water are also reported as somewhat satisfying. Such a process, however, can be carried only so far because it is only natural that if wells are plugged back consistently with the gradual rise of the water line in the sand, eventually these wells will be plugged off completely from the Siliceous lime.

That the Layton sand may partially revive the Garber field in Garfield County is evidenced by the Roxana Petroleum Corporation's Schroeder 11 which flows 50 barrels an hour since being drilled into the Layton at 3617 feet.

This is the first well in the Garber field to produce naturally from the Layton sand. The other producer to date from the Layton there is the Prairie Oil & Gas Company's well which is a pumper.

Although the Sinclair Oil & Gas Company has had no success so far with tests to the Layton on their Hartley lease, the Mid-Continent Petroleum Corporation and the Marland Oil Company immediately announced that they would drill a well to the Layton on their School land lease in the SE 13-22-4w. It is reported that the Roxana and others are considering other tests on their holdings.

It is likely that not a few Garber operators will plug back some of the oil deep sand wells which have gone dead to the Layton sand and give it a thorough test.

The Sinclair Oil & Gas Company has decided to give the deep horizon another test with its Burns 1, SE 30-22-3w. It is now drilling below 4997 feet in a lime formation.

The deep test of the Sinclair Oil & Gas Company, the South Walker 26, NWc SE 24-22-4w, is a failure at 5423 feet with the bit in a water sand.

Speaking of deep tests, the Marland Oil Company has decided to abandon its A. M. Thomas, NW W½ SW 15-25-2w, in the Alcorn Pool at 4787 feet. The casing is being pulled preparatory to plugging.

The Marland Oil Company's Stall 1, NW SW 22-25-2w, the graveyard location, is drilling below 4808 feet in a hard black lime.

South Papoose

It was suggested in these columns a while ago that the South Papoose pool may be the major discovery of late 1925. That, is might be added, was when South Papoose was still very

much a "one well" pool. Now such prospects are anything but bright, especially to the operators who sent a million dollars after the large production which was believed to be found there.

The present developed area of the South Papoose pool in 26-9-9, Hughes County, is, besides the "discovery well," almost a complete failure. The Independent Oil & Gas and Foster Development Companies' well in the SE NE NW 26-9-9, is considered a dry hole at 3505 feet. It was expected to be at least a commercial producer and is but a quarter of a mile south of the initial producer.

Just north of the Independent-Foster well, the Stover 2, SEc 23-9-9, is apparently coming in dry also. The Independent Fatt 1, SW NE 26-9-9, or one-fourth mile northeast of the discovery well, is making only 40 barrels per day, and the Empire Gas & Fuel Company's direct offset to the discovery has dropped consistently until it is now producing only 192 barrels as compared with its one time production of more than 350 barrels a day.

The South Papoose field is, to say the least, a disappointment of the first order. There are still several wells drilling and the hope is tenaciously held by some that production may still be found on a southeast trend from the discovery well.

Kansas

In the Keighley district of southeastern Butler County, Kansas, the most active area of central Kansas, the Phillips Petroleum Company added a fourth producer with its Truesdale 1, SWc 27-27-7. It had the top of the sand at 2721 with a show of oil. A disappointment came, however, when at 2727 it ran into a shale break in the sand. Sand was not found again until 2745 feet. From this depth to 2754, the present total depth, oil is being found. The well has not been completed but is estimated at around 100 barrels natural.

The Truesdale 1 is a north offset to the original Blunt well of the Greenland Oil Company and others. A report from the field shows that there are 15 drilling wells in the Tobler-Blunt district and five new locations with others being staked daily.

Effort is being made to link up the Blunt district with the Tobler area, a mile to the northeast. The Greenland Oil Company's Kruse 1, NE NW 27-27-7, which is rated at 600 barrels daily, is a half mile northeast of Tobler area and, therefore, directly between the two pools.

Harry L. Hendershot, district sales representative in the Los Angeles district for the Reading Iron Company of Reading, Pa., was stricken with a heart attack while returning to Los Angeles from a trip to the fields, and died shortly after at Paso Robles, California, on Thursday, January 14. The funeral was held Wednesday at Parkersburg, W. Va.

Gasoline Continues Erratic Trend; Crude Still Strong

The price trend on refined products in the Mid-Continent has taken an irregular course during the past 30 days, but owing to the firm condition of the crude market, the quotations on gasoline have not varied more than three-quarters of a cent. The gasoline market has reacted quickly to heavy buying, especially that coming from export circles, and softer prices follow within a few days after the placing of such orders. The advance of gasoline prices two weeks ago to a level near the peak for the winter months as result of quantity buying of U. S. motor grade and the high test product by export jobbers, has since been followed by a price drop ranging from one-quarter to a half cent per gallon on the popular grades of gasoline.

The principal support received by the Mid-Continent gasoline market during the past month has been furnished by exporters, while domestic jobbers have conducted a hand to mouth policy of taking care of their current requirements, which are normally low at this period. The new business passed on to the Mid-Continent refiners by the exporters calls for delivery over the next 30 days, and the plant owners are finding a surplus supply of gasoline accumulating in their tanks after taking care of spot orders and making deliveries on contracted material. Gasoline stocks in the major refining centers of the Mid-Continent have not reached a burdensome stage, but the volume was sufficient during the past week to cause prices to seek lower levels. The U. S. motor grade was offered freely at 9¾ cents, while the 64-66 gravity product broke below 12½ cents.

Refined products, chiefly gasoline, have escaped severe price reductions so far this winter, and the upholding of prices to a profitable level for plant owners is largely due to an advance in Mid-Continent crude prices being generally expected. A movement for higher crude prices was launched late in November when the scramble for additional crude by leading buyers restored premiums in a number of fields. The failure of crude prices to move to higher levels has placed the market on a firm working basis for a good year during 1926, and has forestalled a revival of drilling that usually accompanies advancing crude prices. Gasoline buyers have shared with the producers the belief that higher crude prices are promising, and the former have been drawn into the market with large orders for protection against price increases. Such has been true in export circles, since the export buyers of gasoline in the Mid-Continent are working several months ahead of their normal schedule this winter, and are paying spot prices for their products.

The steady decline of light crude production in the Mid-Continent during the past two months has been a major factor in the creation of a firm crude price structure, and the widespread payment of premiums by independent crude buyers has resulted in the loss of connections by major purchasers. The latter are credited with holding back on meeting such competition by posting a substantial advance in crude prices, owing to the threat offered by California's surplus production of crude and refined products. Premium payments by independent buyers have forced Mid-Continent crude prices to higher levels in previous years, and it is from this source that the first boost in 1926 can be expected.

Premiums are now available in all the high gravity fields in Texas where independent refiners have facilities for transportation of the oil. The average premium on daily runs in North Texas amounts to 15 cents above the posted gravity schedule, while producers in the Mexia-Corsicana district are being actively solicited at 10 cents. Several independent refiners are taking on new contracts in the Ranger-Breckenridge district at 15 cents. The heavy oil produced at Luling is bringing a big premium above the posted price used by the pipe line company serving this field, and spot crude is somewhat hard to locate at $1.35 per barrel, as most of the current production has been sold on contract to railroads for fuel purposes.

Natural Gas Association Meeting in Tulsa May 17-20

Tulsa, Okla.—The twenty-first annual convention of the Natural Gas Association of America May 17th to 20th, inclusive, at Tulsa, Oklahoma. A. W. Leonard, vice-president of the Oklahoma Natural Gas Company and president of the association will preside.

In connection with the meeting of the Natural Gas Association will be that of the Gas Supply Men of America. Exhibits by the supply men at the grounds of the International Petroleum Exposition will bring the latest in equipment before the body.

Deep Sand Discovery at Spindletop Gives Field New Future

Houston, Texas.—Spindletop, made famous January 10, 1901, when its Lucas No. 1 brought production in quantities larger than had ever been known, again deserves recognition, after dropping out of the limelight of the industry for almost a score of years.

The discovery of heavy crude in the deep lateral sands off the edge of the Spindletop dome January 13 by the Yount-Lee Oil Company when its McFaddin No. 3 completed at 2780 feet for an initial yield of 5000 barrels, offers the field a new future. The Yount-Lee well has increased its flow gradually under a heavy gas pressure, and six days after completion was flowing 6000 barrels through a 1-inch choke.

Success of Yount-Lee in finding deep production off the dome follows 12 years of exploitation around the dome. During this time Spindletop saw many companies come and go with failure in their attempts to open the productive sands around the dome. The search for deep production around Spindletop goes back to the discovery of deep pay off the edge of the Humble dome in 1913.

The Spindletop Deep Well Company began drilling early in 1917, and put one test down to 3832 feet on block 27 of the La Salle Townsite Company, but the hole tested dry. In 1918 the Gulf Production completed its McFaddin No. 1 for 250 barrels flush, but the well failed to flow more than a few days, and was junked and never reconditioned. This depth was 2948 feet. This test was followed by the Gulf's McFaddin No. 2, 500 feet southeast of the No. 1, which was drilled to 3278 feet; the No. 3, drilled to 3789 feet; the No. 4, which went into salt 1000 feet to the northeast, and the Gladys City No. 1, which was a failure at 4700 feet. Not long after the Gulf explorations, Marrs McLean drilled a short distance off the salt on the west to a depth of 3700 feet with no success. In all these tests nothing more than small shows were encountered.

In 1922 the Rycade Oil Corporation entered the Spindletop territory in search of deep oil, but ended in 1924 with no more success than had been found by previous explorations. Its McFaddin went to a depth of 4162 feet, about 700 feet east of the Gulf's No. 1. At 3895 the test showed about 15 barrels on the swab. Rycade's No. 3 was drilled to 5400 feet just off the southeast edge of the salt, and its Gladys City No. 1 went to 3962 feet on the northwest side of the dome in 1924, neither of the tests finding a show.

The first reliable indications that the flank sands around Spindletop dome held commercial production came with the completion of an 800-barrel producer of Yount-Lee in its McFaddin No. 2 late in November, 1925, about 1200 feet to the south of the field's southernmost production. The well began flowing by heads from a 2588-foot sand, but lack of gas pressure caused the flow to die down within 18 hours. After failure to flow for a week the well came in a second time making a head of around 75 barrels every 10 hours, and it was put on the pump. Since early in December it has been pumping approximately 200 barrels. Oil from this well tested 28.2.

Yount-Lee's No. 2 was immediately followed by the McFaddin No. 3, which resulted in the present producer. It was drilled 300 feet to the south of the No. 2. The gravity of the No. 3 tested slightly higher than 23, bringing it five degrees lower than that of the No. 2 and about two degrees higher than the regular Spindletop crude.

The depths of the Nos. 2 and 3 show the slant of the dome to be approximately 35 degrees. The No. 3, drilled 300 feet to the south of the No. 2, found production at a level 192 feet lower.

At the close of 1925 Spindletop field had produced a total of 48,782,600 barrels. All of this crude came from the shallow cap rock formation.

In the event the present producer holds up to an appreciable output Spindletop is just now entering a stage which is history to most of the first class fields of the Gulf Coast. Its present situation resembles much that of the Humble field. Humble first produced in 1905 from cap rock formations around 875 feet. From around this depth the field turned out approximately 45,000,000 barrels. Then in 1917 deep production was found, and Humble has to its credit slightly more than 50,000,000 barrels from the deep sands.

The possibilities of future production from the deep sands around Spindletop can not reasonably be denied because of the many condemned spots around the dome. Hundreds of acres around Spindletop are yet untested, and the West Columbia field has produced more than 58,800,000 barrels from a block of less than 80 acres. During the years of drilling around Spindletop Hill there has been few more dry hole than were drilled around Humble dome prior to the opening of deep production there.

Yount-Lee Oil Company owns lease rights on about 40 per cent of the acreage surrounding the dome, including the large McFaddin-Weiss-Kyle tract to the south, several smaller blocks of McFaddin-Weiss-Kyle land on the northeast, and practically all of the Gladys City tract on the northwest side of the field.

Yount-Lee officials state that the development of the new discovery will not be hurried to any great extent. The company has two rigs on the property, one of which is setting to drill the Gladys City No. 2 to the northwest of the field following the failure of No. 1. The rig from the new producer will be moved to a new location offsetting the No. 3 McFaddin, which has yet not been definitely made.

The McFaddin No. 3 is located approximately 2500 feet south of the site of the Lucas No. 1.

New Ft. Bend County Dome Opened by Gulf Company

Houston, Texas.—Orchard salt dome, located in the northwestern section of Fort Bend County, was added to the list of potential Gulf Coast fields this week with the completion of the Gulf Production Company's Moore No. 5, a rank wildcat, for an initial of between 2000 and 2500 barrels of 34 gravity crude. Production came from a 40-foot sand at a total depth of 3708 feet. Due of the lack of storage facilities the well was shut in a few hours after completion.

The Moore 5 location is almost in the center of Randon's Lake, which covers 840 acres. The lake is a shallow lowland filled with water only during the rainy seasons, and stands out as a marchy lowland rather than a lake.

The development of Orchard dome has been a Gulf project from the beginning, this company having located the dome by means of the seismograph in the fall of 1924. The salt was struck December 21, 1924, at 375 feet in Moore No. 1. The development of further production around the new producer will also be by the Gulf Production Company, it being the only company holding acreage close in to the well. Gulf controls the entire 11,000 acre ranch of John M. Moore with the Moore 5 almost in the center of the tract. The nearest acreage held by another company is in several small blocks to the north, held by The Texas Company. A block of more than 4000 acres owned by the Gulf lies between the well and The Texas Company leases.

The Moore 5 is almost on the south line of the L. Burknap survey, 1000 feet and 45 degrees east of the No. 4, which was abandoned August 5 at 2085 feet.

The log of the Moore 5 shows many

hard formations. The well was spudded in shortly after the middle of August, and some difficulties are shown by the drilling report. Operators were forced to side track at around 3200 feet after drilling the original hole to below 3450 feet. The test was compelled to shut down several days the week before completion on account of high water in the lake.

The new productive area lies nine miles west of Richmond and about two miles from the village of Orchard. The nearest railroad is the Southern Pacific, and several miles south of the Santa Fe and Gulf road, both of which run to Richmond.

With the discovery of production at the Orchard dome, Fort Bend County is fast coming to the front among counties of the Gulf Coast territory as holding much of the potential production. Orchard makes the second dome to be opened in Fort Bend County in 1926, the Nash dome in the extreme southeastern side of the county having been opened by the Rycade Oil Corporation January 3, with a 600 barrel producer. Between these two domes and almost on a straight line lie the Long Point and Big Creek domes. The majority of the acreage around the two latter domes is also controlled by the Gulf.

The Gulf is now drilling its Davis Nos. 7 and 8 at Long Point, after the failure of five other wildcats on the Davis land.

Big Creek was discovered by the Gulf on May 3, 1922.

The Long Point dome was located January 7, 1925, by means of both the torsion balance and the seismograph used by the Pathfinder Oil Company, which at about that time was taken over by the Gulf Production Company.

New Area Uncovered by Test In Northwest Young County

Wichita Falls, Texas.—Bridwell-Mayfield and associates uncovered a virgin oil producing area in the northwest part of Young County early this week when their H. B. Street 1, located near the center of the east half of section 2444, and about one and three-quarter miles due south of the Harmel field, drilled through four feet of sandy-lime into an oil sand at 1282-90 feet. This discovery is rated good for a 25 barrel pumper, and preparations are being taken to complete at the present depth. Although the potential productive area around this well is somewhat limited by dry holes, the nearest dry hole is located about one-half mile to the southeast. The acreage is closely held by companies and individuals.

Wildcat drilling blocks are being sought by major companies and operators in Jack County on the strength of the recent discovery made by the Buttram Petroleum Company's Joe Preston 1, which is swabbing and flowing 60 barrels of 41 gravity oil from the Strawn sand at 2068-74 feet (SLM). This well is in the D. C. Sleygle survey, A-1003, and about five miles southeast of Bryson. Eight-inch casing was set at 2015 feet, and the remainder of the hole is cased with six-inch liner. Prairie is extending its pipe line to the Buttram discovery.

Crockett County Boosted by Third Well in World Pool

San Angelo, Texas.—The third producer for the World pool in upper Crockett County was in process of completion early this week with a greater volume of gas showing in the oil pay than was found in the first two completions. This exploration work is being done jointly by Humble and the Marland Oil Company of Texas on the L. P. Powell ranch, section 2, block BB-2. The Powell 3 is located 1320 feet south of the discovery well, and is credited with having encountered its first show of live oil after drilling sandy-lime pay at 2660-67 feet (SLM). The hole began filling with oil when carried below the 2700-foot level. The flow of gas made it necessary to suspend operations and move back boilers after drilling six feet of brown sandy-lime pay at 2717-23 feet. The well began slopping over the top of the casing Monday while shut down, and is showing for a larger producer than the first two completions, which are flowing about 20 barrels of 31 gravity pipe line oil daily through tubing.

Since the Powell 3 has been carried about 70 feet lower than the discovery well and about 40 feet deeper into the sandy-lime formation than Powell 2 without encountering water, Humble and Marland has started rigging up Powell 2 to drill deeper. Interest in this area has been greatly stimulated since the latest test went below the discovery pay level without striking water, and the presence of a heavier gas flow has lent encouragement to the numerous major companies and operators that paid out big cash sums for lease and royalty protection on acreage surrounding the original drilling block now owned by Humble and Marland. The latter two companies paid $350,000 cash and agreed to pay an additional $1,050,000 in oil for the discovery well and about 2300 acres last June from the World Interests, but have not fully cleared the title to the property, owing to the great number of individuals holding shares, or units in the Marland proposition.

The Powell 3 logged the top of the salt at 1170 feet, with a surface elevation of 2812 feet, and picked up the lime at 2585 feet. These formations are slightly higher than the log of the discovery well and Powell 2. The production of the Powell wells is being used for fuel, and the surplus stored at the wells.

A fourth completion for the World pool will follow next week, barring mishaps, and the deeper formations underlying the discovery pay are to be fully explored, unless a big well is obtained in the upper horizon. This fourth test is being drilled by Carl Cromwell, who drilled the discovery well at Big Lake, and is an almost east offset to Humble & Marland's Powell 3. Carl Cromwell's test logged the top of the salt at 1135 feet, with a surface elevation of 2799 feet, and promises to be the high spot of the pool, as Humble's Sorg 1, located a mile southeast and in the northwest corner of section 61, got the salt at 1130 feet, with a surface elevation of 2757 feet. Gulf Production Company will be forced to enter the field as an active developer in the event Carl Cromwell makes a well, as Gulf has the south offset to drill.

Upton County's wildcat producer is pumping about 80 barrels oil and 20 barrels water daily after plugging back on a number of separate occasions from water sand at 2271 feet to 2237 feet. This well is owned jointly by Republic Production Company and Marland Oil Company, and is on the Baker land. The Independent Oil & Gas Company's A. S. Burleson 1, located about 1300 feet northeast of this producer, logged the top of the salt at 575 feet, with a surface elevation of 2616 feet, and is running higher structurally than the Baker producer. Roxana has leased land to establish field camp and warehouse on the Burleson ranch in order to move in and start testing its acreage lying next to the Baker discovery well.

Lockhart and Company's W. D. Johnson 1, located on a wildcat block of 20,000 acres in upper Loving County, is showing high gravity oil with water in hole from sandy-lime at 3165-76 feet, and is shut down for 8¼-inch casing at a total depth of 3218 feet. In Reeves County, Owen-Sloan and Deep Rock Oil Company's M. W. Tatum 1, located 1½ miles northeast of San Martine, logged a show of oil at 1969-81 feet, and is shut down for repairs with a second show of oil at 2290-2308 feet. The World Oil Company's Abrams 1, located in section 39, block 57, also reports a show of oil that was passed up at 1485 feet. Humble has moved in steel derrick to drill deep test in section 33, block 57, Township 1, T. P. Railway survey, Reeves County.

Yount-Lee Has New Sand Producer at Sour Lake

Houston, Texas, — Yount-Lee Oil Company brought in its Gilbert No. 1 several hundred feet to the north of old production in Sour Lake field January 19 for an initial production of 2000 barrels. The flow is coming from 4250 feet, which is a different level from which production has been obtained at Sour Lake. Gravity of the crude is 35.

Although deep production has been previously found at Sour Lake, the Yount-Lee well is reported as the discoverer of a new sand. The bulk of Sour Lake field production has come from shallow cap rock production. The well is located on the 10-acre Gilbert-Martin tract. It was at this point that a deep test was drilled 10 years ago.

Government Geologists Report on New Mexico Oil Field

Bloomfield Mesa has flow of light oil from shallow depth

INASMUCH as it seems probable that New Mexico will bid for a bigger place in the petroleum industry during 1926 than she has previously held, any information on potential areas in that state is now timely. A number of structures have been outlined and tested. Some of these give promise of oil in important quantities. Among them is the Bloomfield Mesa oil and gas field, San Juan County.

A survey of this district has been made by government geologists and their report follows:

"Interest in the Bloomfield Mesa field was aroused by the completion, on November 15, 1924, of the Bloomfield Oil and Gas Company's No. 2 well, in the northeast corner of the northwest quarter of the northwest quarter of section 22, township 29 north, range 11 west, at a depth of about 706 feet. The well had an initial daily yield of five or six barrels of 64 degrees Baume oil with considerable salt water. The light gravity of the oil and its occurrence at so shallow a depth led to active exploration in nearby areas, and by the latter part of June, 1925, when the field was visited by W. W. Boyer and G. H. Hansen of the Geological Survey, Department of the Interior, seven wells had been completed, capable of producing daily from one to six barrels of oil each. Moderate flows of gas, some of it carrying appreciable quantities of gasoline, had been developed by several other wells. The largest gas well gave an initial yield of about 2,000,000 cubic feet of dry gas a day, which was piped to different parts of the field and used as boiler fuel in drilling.

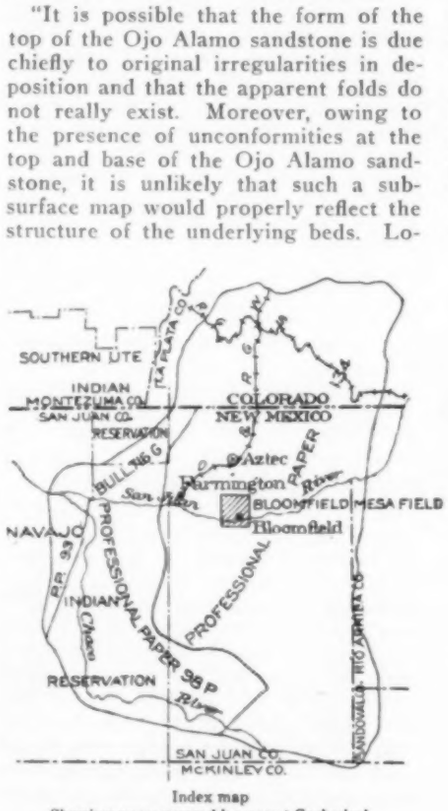
"Three producers were completed in the field last year.

"According to J. B. Reeside, Jr., the indurated rocks exposed at the surface of Bloomfield Mesa are of Tertiary age and belong to the Torrejon formation of the Nacimiento group. At depth the wells penetrate the Ojo Alamo sandstone, of Tertiary (?) age, below which are the Upper Cretaceous (?) McDermott formation and the Upper Cretaceous Kirtland shale. The Farmington sandstone members of the Kirtland shale, which usually occurs at about the middle of the formation, contains the productive beds. This member, composed of lenses of sandstone in shale, is of fluviatile origin and is therefore very variable in thickness and composition, although persistent as a unit for many miles along its outcrop around the San Juan Basin. Observations by Reeside and others show that the individual sandstone beds are not persistent and may be entirely replaced by shale within a few hundred feet.

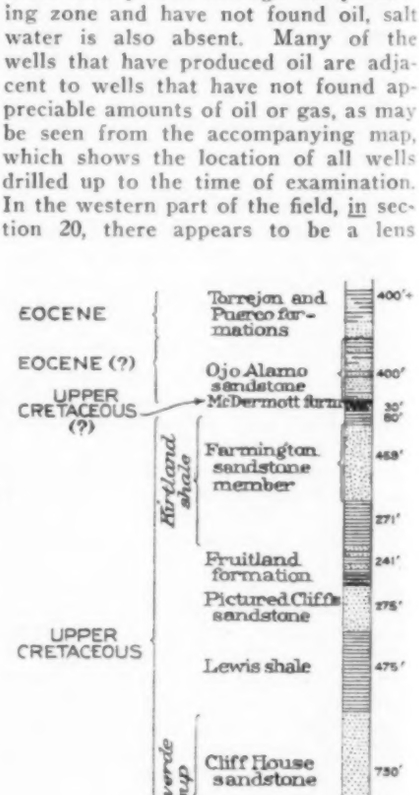
"The stratified rocks at the surface of the Bloomfield Mesa field apparently dip at most places a few degrees north of east, at a rate of 20 to 30 feet to the mile. A subsurface map showing the configuration at the top of the Ojo Alamo sandstone would give the impression, however, that this general dip is interrupted by two very low domes, one with its apex near the Coal Creek wells, in section 20, township 29 north, range 11 west, and the other with its higher part near the Montezuma Syndicate well in section 13, township 29 north, range 11 west, separated by a syncline near the Bloomfield Oil and Gas Company's wells in the southwest quarter of section 15 and the northwest quarter of section 22.

"It is possible that the form of the top of the Ojo Alamo sandstone is due chiefly to original irregularities in deposition and that the apparent folds do not really exist. Moreover, owing to the presence of unconformities at the top and base of the Ojo Alamo sandstone, it is unlikely that such a subsurface map would properly reflect the structure of the underlying beds. Local folding has apparently had no important part in the accumulation of oil and gas in the field, though there are some suggestions of a broad fold, with its axis running from the rim of the San Juan Basin toward the center of the basin, that may have had some influence.

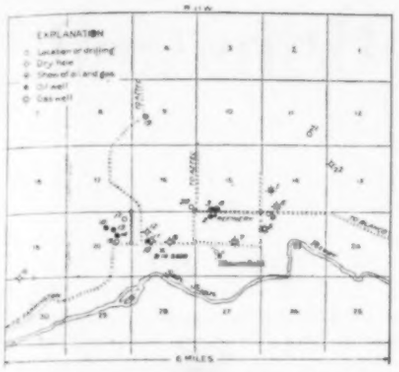
"From all the data available it seems probable that the occurrence of oil and gas at Bloomfield Mesa is controlled by the presence of shale-sealed sandstone lenses in the Farmington sandstone member of the Kirtland shale. Where oil has been found in quantities sufficient for production the drill has commonly released first gas, then oil, and finally salt water. Attempts to shut off the salt water have resulted either in shutting off the oil or diminishing its yield, and operation has shown that where the sand contains oil it also carries salt water. Where wells have passed through the producing zone and have not found oil, salt water is also absent. Many of the wells that have produced oil are adjacent to wells that have not found appreciable amounts of oil or gas, as may be seen from the accompanying map, which shows the location of all wells drilled up to the time of examination. In the western part of the field, in section 20, there appears to be a lens



Index map
Showing areas covered by recent Geological Survey publications



Section of formations on San Juan River west of Bloomfield
(After J. B. Reeside, Jr.)



Present Development at Bloomfield Mesa

which yields a small amount of oil from the Coal Creek Oil Company's wells Nos. 1 and 2 and the West Coast Oil Company's well No. 1. The Leidecker No. 2, just a few hundred feet away, found neither oil nor gas at the horizon of the bed from which these wells produced. Similarly in section 21 the Gibson Oil Company's well No. 1 (No. 10 on the map) obtained a yield of about two and one-half barrels a day, but wells Nos. 2 and 3 found nothing. In sections 15 and 16 the Bloomfield Oil and Gas Company found oil in wells 2, 3 and 4 and gas in wells Nos. 5, 6 and 7. Well No. 5 produced about 2,000,000 cubic feet of dry gas a day when brought in, and well No. 6 was capable of producing 200,000 to 300,000 cubic feet of gas, which would yield, according to a field test, about three pints of gasoline per 1000 cubic feet.

"No test has yet been made of the Pictured Cliffs and Cliff House sandstones, which, from stratigraphic information obtained at the outcrop along San Juan River and from logs of wells in the Bloomfield Mesa field, may be expected at depths of about 1400 and 2200 feet, respectively. However, if, as appears probable, there is no definite anticlinal structure in this area this absence of favorable structure may have prevented the accumulation of commercially valuable pools of oil or gas in these less lenticular deeper sands."

Texas Company Building Pipe Line to Boling Dome

Houston, Texas,—The first two miles of an eight-inch pipe line being laid by The Texas Pipe Line Company, from West Columbia to the discovery well of The Texas Company at Boling, Wharton County, has been completed out of West Columbia. The line was started about two weeks ago for the purpose of taking care of present and probable future production at Boling.

Production from the Taylor 3, of The Texas Company at Boling made a daily average of 3950 barrels for the week ending January 16. Following completion December 13 for 10,000 barrels flush the well was choked to 1,500 barrels. Since that time the flow has gradually increased.

Figures for November Show One Per Cent Decline

PRODUCTION of crude petroleum in the United States for the month of November, 1925, as reported to the Bureau of Mines, Department of Commerce, amounted to 61,658,000 barrels, a daily average of 2,055,000 barrels. This represents a decrease from October production of 21,000 barrels per day, or one per cent.

Of the seven districts, the Rocky Mountain area again was the only one to show an increase in production, though declines were recorded in Wyoming and New Mexico.

Production in California continued to decline.

In the Mid-Continent field the daily average production of Oklahoma was almost 500,000 barrels per day, an increase over October of 13,000 barrels. This is entirely offset by a drop in Texas, the production of which has been steadily declining since early in the year.

Of the total daily production of the country, 43,748,000 barrels, of 70 per cent, was of light crude, and 17,910,000 barrels, or 30 per cent, heavy.

Stocks of crude oil east of California amounted to 296,690,000 barrels on November 30, 1925, a decline during the month of 1,270,000 barrels. This compares with 319,859,000 barrels on hand November 30, 1924, and is the lowest point in stocks since February, 1924. Most of the above-mentioned decline was in refinery storage, which dropped off almost 1,000,000 barrels. In California, stocks of both light and heavy crude, including all grades of fuel oil, continued their steady rise.

An interesting fact in connection with imports and export figures is the big decline in imports during the first 11 months of 1925 as compared with the same period in 1924. From January 1 to November 30, 1925, imports totaled 57,645,000 barrels. For the same period in 1924, the total amount of oil brought into this country was 71,934,000 barrels.

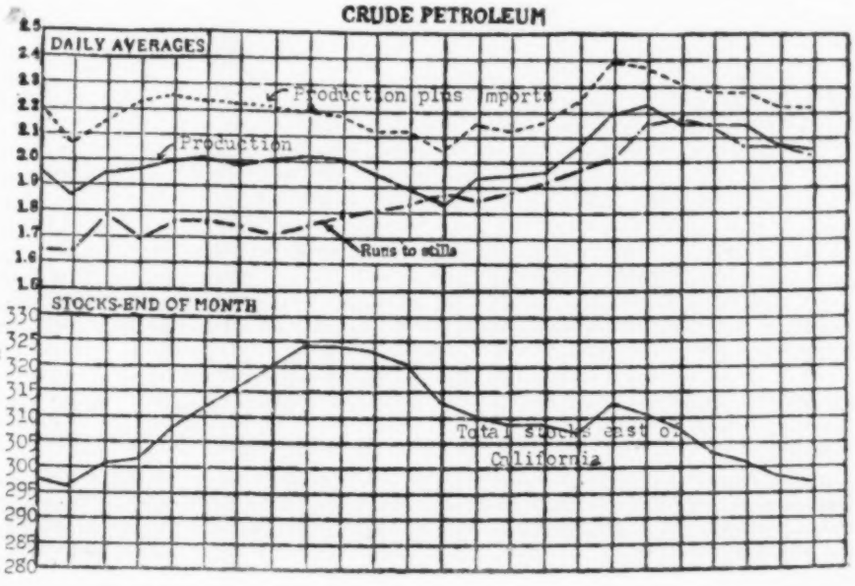
Parallel with this decrease is noted a boost in indicated deliveries of crude petroleum to domestic consumers, totaling 57,771,000 barrels. Over the 11 month period practically every state showed increased consumption.

Shipments of California oil through the Panama Canal to Eastern ports during November increased 164,000 barrels. However, for the first 11 months of the year there was a decrease in California shipments aggregating 24,276,000 barrels. Thus Mid-Continent operators have not had to compete heavily with California in Eastern markets, a fact which has done much toward the general stabilization of the situation.

Total amount of crude oil run to stills during November was 60,521,040 barrels, of which 56,985,857 barrels were domestic oil. California showed the heaviest consumption of oil at refineries, with Texas coming next. East Coast refineries, and those in Texas and Louisiana, were the only ones to make use of imported crude.

Production of natural-gas gasoline continued its increase through November, a total of 102,400,000 gallons. This represented an increase of four per cent over the previous month. Greater activity in the North Texas area was mainly responsible for the November increase.

Stocks of raw natural-gas gasoline at the plants amounted to 12,983,000 gallons, November 30, a decrease from October stocks of 1,778,000 gallons. Blending at the plants continued to be a minor factor, and stocks of blended motor fuel showed no material change.



Mountain States Completions and Runs Increased

Casper, Wyo.—Completions, reaching a very low figure during the last weeks of December, jumped to a much higher figure in the Rocky Mountains during the past week. In the Salt Creek field alone, the Midwest interests announced the completion of 15 wells, all producers. Montana did not fare so well, reporting only five completions during the week. New Mexico came in for three producers, all located in Eddy County. Activity in Colorado is holding up very well but no wells were completed during the week. In the Wellington and Fort Collins fields several tests are in or near the producing sands and will probably be finished soon.

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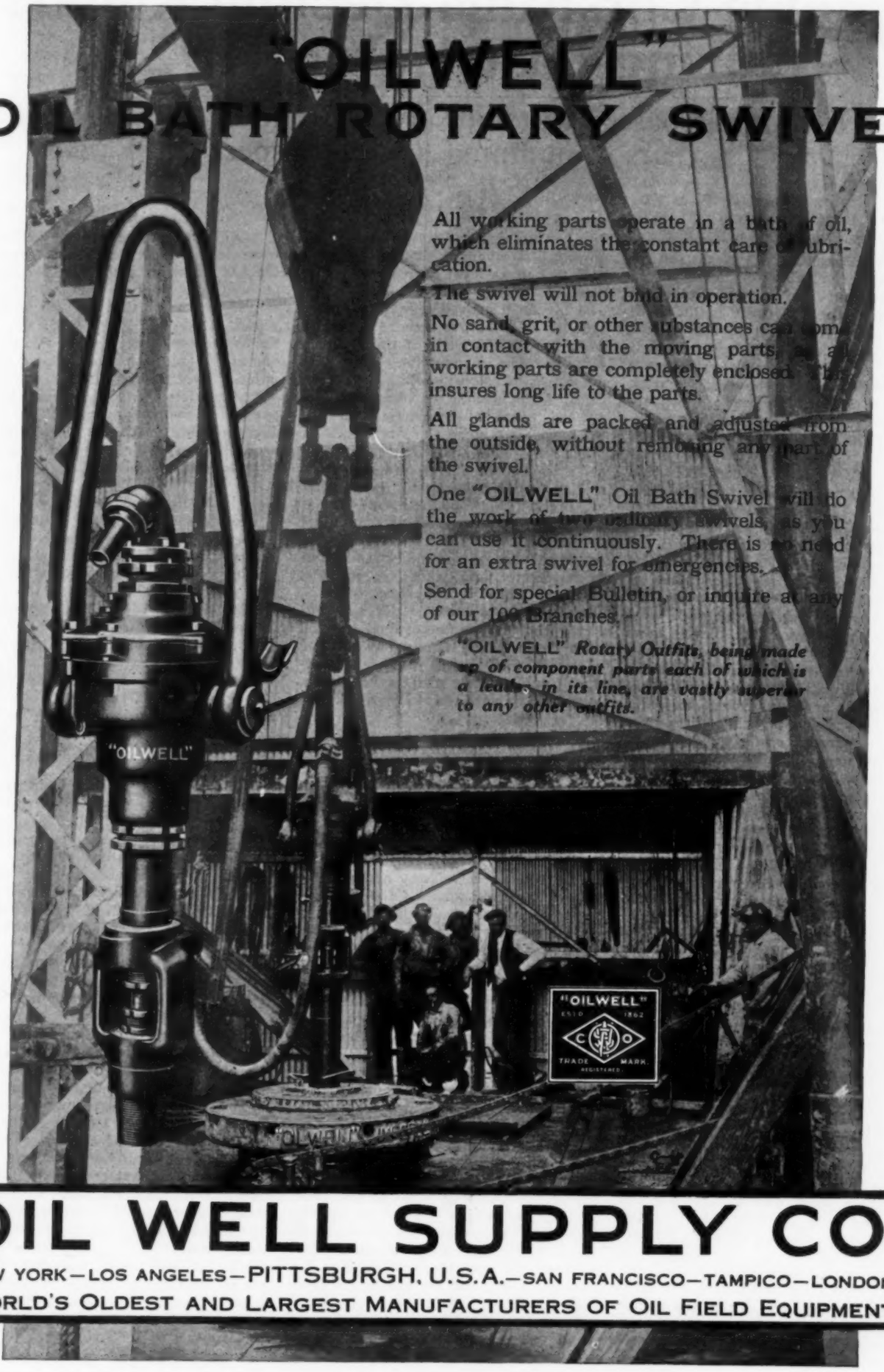

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No sand, grit, or other substances can come in contact with the moving parts, as all working parts are completely enclosed. This insures long life to the parts.

All glands are packed and adjusted from the outside, without removing any part of the swivel.

One "OILWELL" Oil Bath Swivel will do the work of two ordinary swivels, as you can use it continuously. There is no need for an extra swivel for emergencies.

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Mexia-Corsicana Decline Rapid During Last Half of 1925

District has passed as major crude producer, but many years of pumping are in prospect

By H. H. King
Staff Representative

THE five separate fields comprising the Mexia-Corsicana district in East Central Texas have played an important role in the decline of daily production of crude in the Mid-Continent to a level that has opened the way for higher crude prices, just as the same fields in previous years have broken down the crude market structure individually and collectively with great volumes of flush production. The Mexia-Corsicana district produced 42,145,520 barrels of crude during 1925, of which 26,888,520 barrels were obtained during the first six months. The spectacular decline of production at Wortham and natural depletion of wells producing from the Woodbine sand pay in the other fields caused the district to suffer a loss of 11,631,520 barrels during the last half of 1925, as compared to the crude yield for the first six months of the same year.

The steady encroachment of water upon the Woodbine sand pay is forcing the Mexia-Corsicana district to relinquish its position of being one of the major sources of crude supply in the Mid-Continent, but its complete exhaustion will require many more years of pumping. The passing of big production in this district leaves behind a creditable history, since the five fields produced 181,292,170 barrels of crude up to January 1, 1926. This great volume of oil has been brought to the surface since the Humphreys' discovery well on the Rogers farm found oil in the Woodbine horizon at Mexia November, 1920, and disproved the old belief that the Woodbine sand was primarily a water bearing formation.

The total value of the crude produced in the Mexia-Corsicana district is estimated at $271,938,255, allowing an average of $1.50 per barrel, while this sum has been enlarged somewhat by the sale of gas for fuel and the manufacture of natural gasoline in plants located in the Corsicana-Powell and Wortham fields. The five fields have approximately 7500 acres of proven leases for oil production in the Woodbine sand, and the total crude yield per acre up to the first of the present year is estimated at 24,172 barrels. There were 1723 pumping wells in the five fields at the close of last month, and these wells averaged 38.96 barrels per day each during the month of December. Shallow pumpers in the Corsicana-Powell field are included.

The Wortham field held the spot light of interest in East Central Texas during 1925 when its daily production rose to a peak level of 165,550 barrels from 73 flowing wells on January 15. The big flush proved temporary, however, as daily output receded to 77,390 barrels from 163 wells at the close of January. The introduction of air compressors to flow wells artificially checked the decline and resumed the upward trend of production late in February, but since the first week in March the production curve on the field has slanted downward until current output is considerably below that of Mexia. The Woodbine sand pay at Wortham is not as thick as that found at Mexia and Corsicana-Powell, and water has flooded the sand much faster in the former field, which reported 298 pumping wells at the close of 1925. These wells are averaging 70 per cent water from the volume of fluid pumped each day. Other than a few shallow gas wells, and several small low gravity oil pumpers, the shallow horizon at Wortham has not proven profitable for development.

The Mexia, Richland and Currie fields are registering a steady decline in production, but the rate of depletion is less severe than that being experienced by Wortham and the Corsicana Powell field. The latter two fields are somewhat small in area, but have been profitable to lease owners. The Mexia field has not received any new production of any consequence since 1923, owing to the proven leases being virtually drilled up, except for a few inside locations on large tracts, but has maintained the slowest rate of decline than any of the fault line fields. Mexia surrendered its lead on total crude yield to the Corsicana-Powell field in May, 1925, and the latter field has held the high honors ever since.

The development of shallow sands, and plugging back of exhausted wells from the Woodbine sand to shallow pay levels by ripping casing have materially aided in prolonging the big production in the Corsicana-Powell field. This field is credited with having a total of 824 pumping wells at the close of 1925, of which 578 are producing from the Woodbine. A total of 81 deep wells have been plugged back successfully from the Woodbine to the shallow sands and revived as pumpers ranging from 5 to 100 barrels initial after being swabbed over a period of time to properly cleanse the rotary mud from behind the ripped casing. There are 165 pumpers in the field that were drilled down for the shallow pay. Only in a few instances have producers encountered water in the shallow pay sands, and since this pay offers high gravity crude similar to that found in the Woodbine, except in the southwest end of the field, it has been found profitable. Most of the shallow pumpers were completed in 1925, and are being pumped on central power, with the production going into lease storage tanks used also for taking care of the output of nearby deep wells.

Development Completed

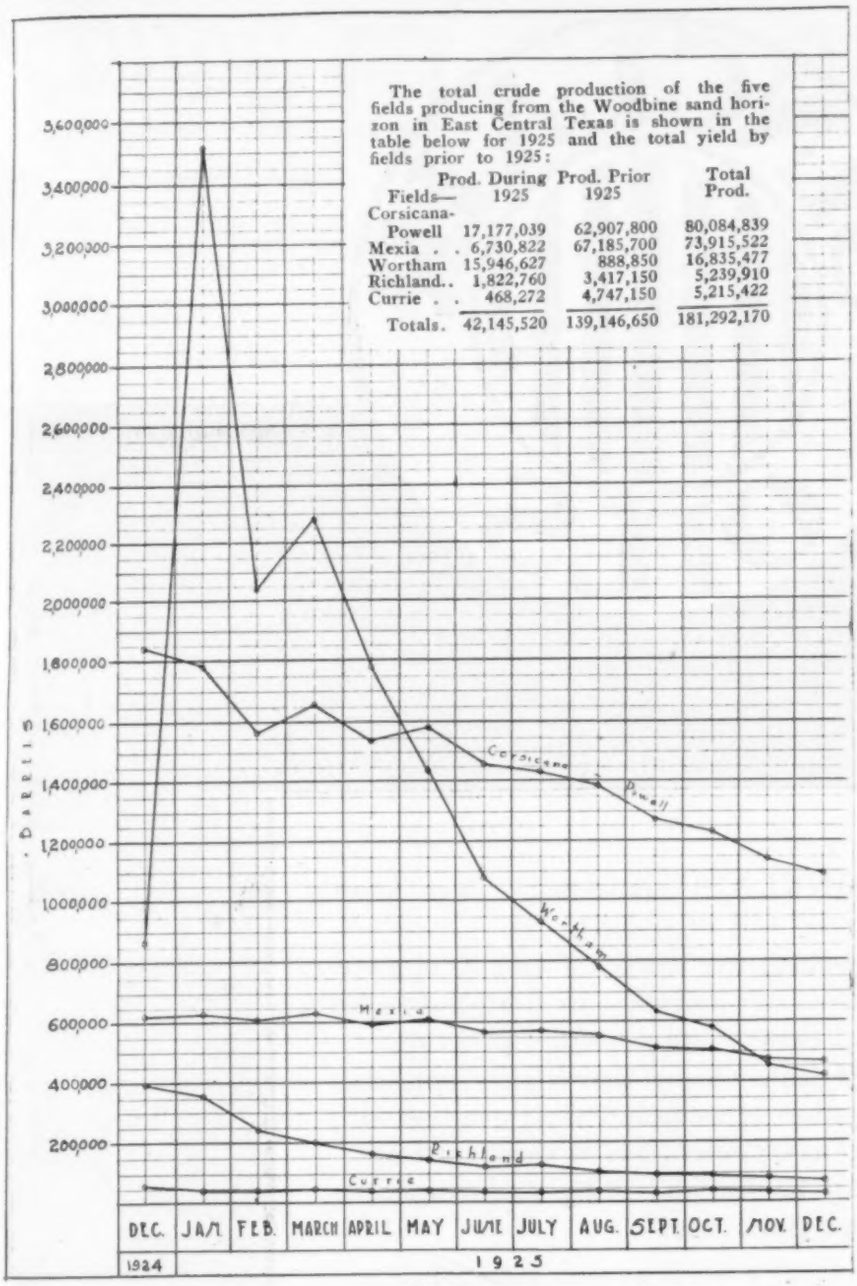
The productive limits of the five East Central Texas fields have been fully defined in all directions, and inside drilling is virtually at a standstill for lack of locations, so the operators are making the best of their water troubles in the Woodbine pay until their wells are drowned out by water. Other than efforts being waged by Magnolia to deepen an old producer on the W. B. David and J. Desenberg leases at Mexia, the formations underlying the Woodbine in the Mexia-Corsicana fields proper are not being explored for deep production.

The search for other fields to the north and south of production along the Mexia fault from the Mexia-Corsicana district was conducted in earnest during 1925, without results. The Woodbine was found to thin out below Mexia in the Groesbeck area, while the Woodbine sand north of the Corsicana-Powell field yielded several heavy gassers spraying great volumes of salt water around Bazette, and nothing but salt water beyond that point. Gulf and Rycade are each testing wildcat acreage in Hunt County before surrendering rather than to continue rental payments, but otherwise no activity is taking place along the north end of the Mexia fault. Several tests are going to the Edwards lime formation below Kosse, but are not attracting any noticeable attention. A stretch of about three and one-half miles of only partially tested wildcat acreage lies in between the Richland and Corsicana-Powell fields, and is considered likely territory for a small pool of the Richland, or Currie type. However, the acreage is badly subdivided among major companies and independents, while those that have fairly large leases have done all the testing they care to at this time.

Since a dry hole scarred trail has

The total crude production of the five fields producing from the Woodbine sand horizon in East Central Texas is shown in the table below for 1925 and the total yield by fields prior to 1925:

Fields—	Prod. During 1925	Prod. Prior 1925	Total Prod.
Corsicana-Powell	17,177,039	62,907,800	80,084,839
Mexia . .	6,730,822	67,185,700	73,915,522
Wortham	15,946,627	888,850	16,835,477
Richland..	1,822,760	3,417,150	5,239,910
Currie . .	468,272	4,747,150	5,215,422
Totals.	42,145,520	139,146,650	181,292,170



Production curve on total monthly production during past 13 months for five fields comprising East Central Texas district

been worn up and down the course of the so-called Mexia fault extending beyond the Corsicana-Powell field to the north and below Mexia on the south without uncovering anything encouraging for new oil producing territory, the geologists, representatives of companies and operators in the Mexia-Corsicana district became bored from idleness. Towards the latter part of 1925 some interest was aroused in leases covering a minor fault to the west and running about parallel with the Mexia field. Leases were bought at prices ranging up to $50 per acre from below the town of Tehuacana to the Comanche Creek crossing on the Navasota River. Transcontinental, Pure and Reiter-Foster were large buyers, and have not tested their leases.

Salt Water in Trinity Sand

The growing desire for virgin territory to carry on wildcat exploration work in East Central Texas other than along the Mexia fault region was waxing warm towards the close of 1925 when information leaked out that a salt water core had been taken from a water well being drilled by the city of Ennis in Ellis County. This test encountered salt water in the Trinity sand at 3560 feet, but did not show either oil or gas. Since the Trinity sand is productive of fresh water, almost without exceptions in this section of the state, the salt water has given rise for the possibilities of a faulted condition existing in the vicinity of Ennis that may also carry oil and gas production. Gulf, E. L. Smith, J. K. Hughes, Texas and Navarro were among the first companies to launch a lease campaign, while individual operators and royalty buyers have been attracted in numbers. The lease buying extends from Palmer in a southwest direction cutting across the northwest part of Ennis to Italy, and prices have claimed from 50 cents to more than $50 per acre for small tracts. The high prices are being paid by speculators. Companies failed to secure solid blocks, owing to the scramble made for leases, so drilling is being retarded. John Olvey and Roy Jenkins have acquired a block on the upper end of the lease play in Ellis County, and have contracted to drill a 3600-foot test on the L. B. Griffith 72.86-acre lease in the R. De La Pena survey, about three miles southeast of Palmer. Magnolia has bought protection against this test, and other major companies are doing likewise.

Since the Woodbine sand at Mexia was generally conceded to be a fresh water sand until the Rogers discovery well proved otherwise, the operators and geologists contend that there are possibilities for the Trinity sand to be taken out of the fresh water class and added to the proven oil sand class in Texas. The Ellis County play is supposed to be on the Balcones fault zone.

C. P. Dodge Dies After Auto Smash at Memphis

Houston, Texas.—C. P. Dodge, secretary and sales manager of the southern division of The Texas Company since 1908, died Wednesday morning, January 13, in a hospital at Memphis, Tennessee, as a result of a fractured spine sustained Tuesday night near Memphis when the car in which he was riding careened into a tree beside the road. Mr. Dodge, who at the time of the accident was returning from a business trip to Memphis to catch a train for Houston, was accompanied by E. H. Cannon, representative at Memphis for The Texas Company, Mrs. Cannon, Lee Winchester, Shelby County official, and Mrs. Winchester. The other members of the party were reported injured but not seriously. Mrs. Dodge, who accompanied her husband from Houston to Memphis, where he was on a special business mission for the company, had left that city for Chicago prior to the accident.

The body arrived in Houston Thursday night. Funeral services were held Saturday afternoon at the Second Presbyterian Church of Houston.

Mr. Dodge was one of the oldest members of The Texas Company, having served in some capacity with the company since 1903. He came to Houston with the company in 1908 to serve in the capacity which he held at the time of his death. He is known all over Texas and was prominent in oil circles throughout the Southwest. He was 58 years of age. Surviving him are his wife, four sons, H. T. Dodge, Casper, Wyo.; H. W. Dodge, New York; P. C. Dodge, Jacksonville Fla.; and D. K. Dodge, Houston; and one daughter, Mrs. Kemerton Deane, Houston.

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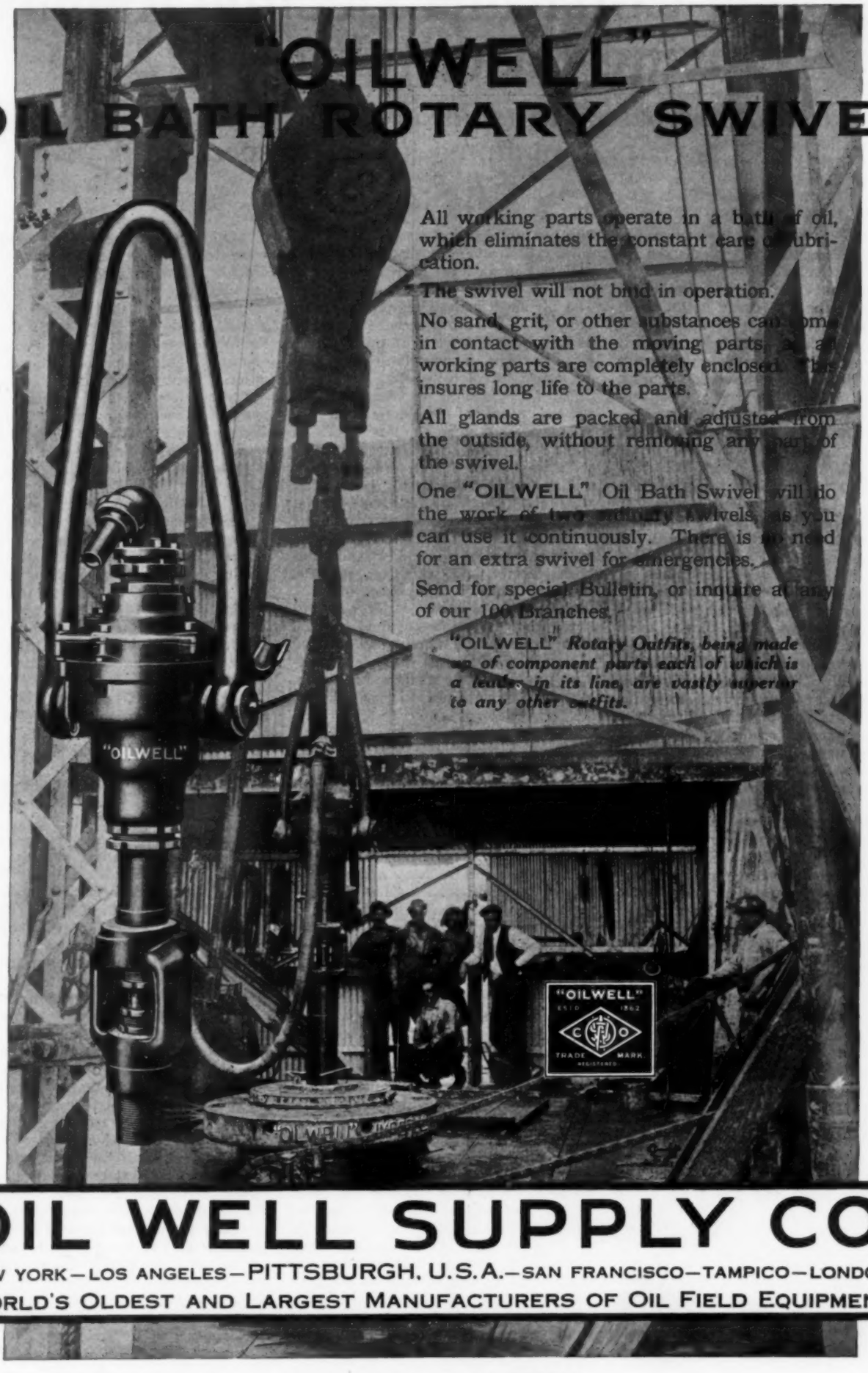

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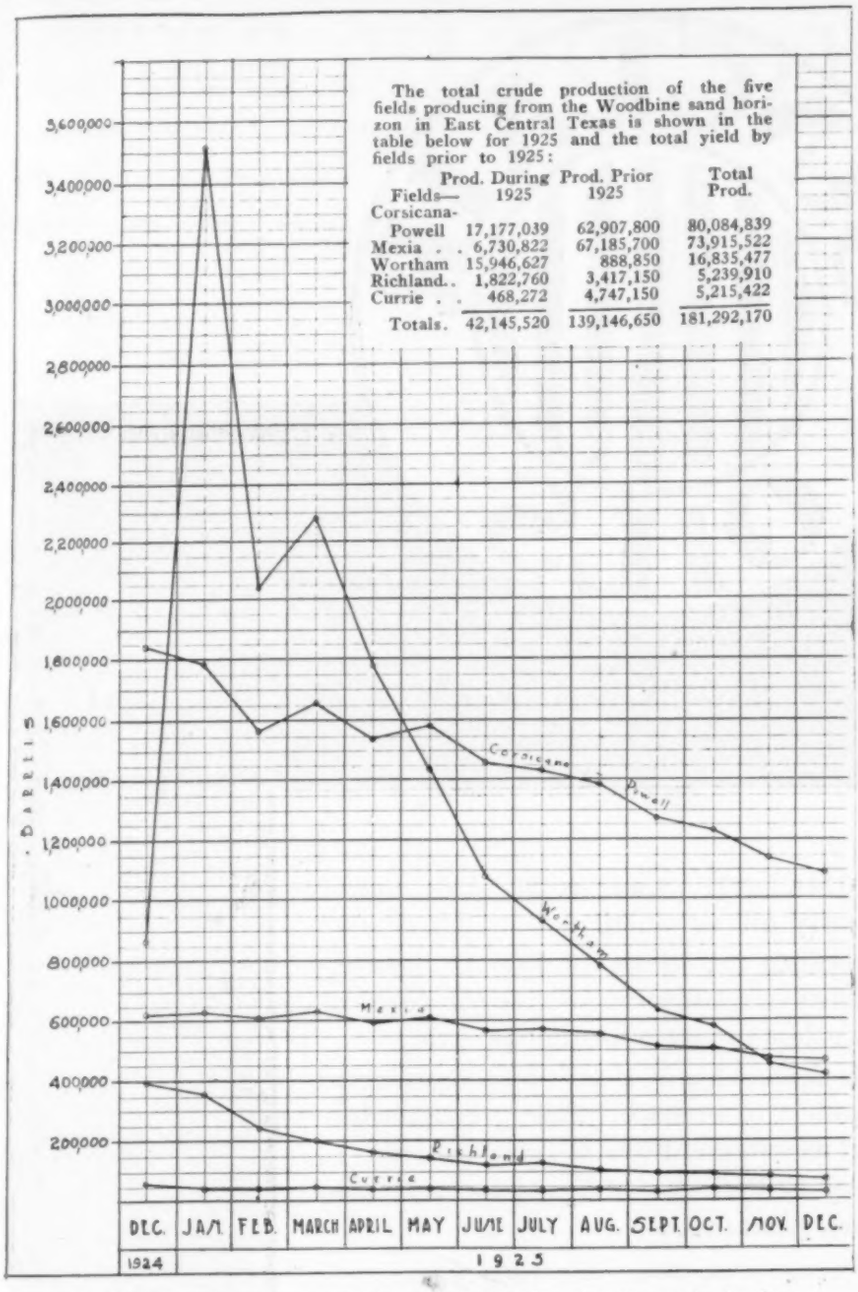
Development Completed

The productive limits of the five East Central Texas fields have been fully defined in all directions, and inside drilling is virtually at a standstill for lack of locations, so the operators are making the best of their water troubles in the Woodbine pay until their wells are drowned out by water. Other than efforts being waged by Magnolia to deepen an old producer on the W. B. David and J. Desenberg leases at Mexia, the formations underlying the Woodbine in the Mexia-Corsicana fields proper are not being explored for deep production.

The search for other fields to the north and south of production along the Mexia fault from the Mexia-Corsicana district was conducted in earnest during 1925, without results. The Woodbine was found to thin out below Mexia in the Groesbeck area, while the Woodbine sand north of the Corsicana-Powell field yielded several heavy gassers spraying great volumes of salt water around Bazette, and nothing but salt water beyond that point. Gulf and Rycade are each testing wildcat acreage in Hunt County before surrendering rather than to continue rental payments, but otherwise no activity is taking place along the north end of the Mexia fault. Several tests are going to the Edwards lime formation below Kosse, but are not attracting any noticeable attention. A stretch of about three and one-half miles of only partially tested wildcat acreage lies in between the Richland and Corsicana-Powell fields, and is considered likely territory for a small pool of the Richland, or Currie type. However, the acreage is badly subdivided among major companies and independents, while those that have fairly large leases have done all the testing they care to at this time.

Since a dry hole scarred trail has



Production curve on total monthly production during past 13 months for five fields comprising East Central Texas district

been worn up and down the course of the so-called Mexia fault extending beyond the Corsicana-Powell field to the north and below Mexia on the south without uncovering anything encouraging for new oil producing territory, the geologists, representatives of companies and operators in the Mexia-Corsicana district became bored from idleness. Towards the latter part of 1925 some interest was aroused in leases covering a minor fault to the west and running about parallel with the Mexia field. Leases were bought at prices ranging up to $50 per acre from below the town of Tehuacana to the Comanche Creek crossing on the Navasota River. Transcontinental, Pure and Reiter-Foster were large buyers, and have not tested their leases.

Salt Water in Trinity Sand

The growing desire for virgin territory to carry on wildcat exploration work in East Central Texas other than along the Mexia fault region was waxing warm towards the close of 1925 when information leaked out that a salt water core had been taken from a water well being drilled by the city of Ennis in Ellis County. This test encountered salt water in the Trinity sand at 3560 feet, but did not show either oil or gas. Since the Trinity sand is productive of fresh water, almost without exceptions in this section of the state, the salt water has given rise for the possibilities of a faulted condition existing in the vicinity of Ennis that may also carry oil and gas production. Gulf, E. L. Smith, J. K. Hughes, Texas and Navarro were among the first companies to launch a lease campaign, while individual operators and royalty buyers have been attracted in numbers. The lease buying extends from Palmer in a southwest direction cutting across the northwest part of Ennis to Italy, and prices have claimed from 50 cents to more than $50 per acre for small tracts. The high prices are being paid by speculators. Companies failed to secure solid blocks, owing to the scramble made for leases, so drilling is being retarded. John Olvey and Roy Jenkins have acquired a block on the upper end of the lease play in Ellis County, and have contracted to drill a 3600-foot test on the L. B. Griffith 72.86-acre lease in the R. De La Pena survey, about three miles southeast of Palmer. Magnolia has bought protection against this test, and other major companies are doing likewise.

Since the Woodbine sand at Mexia was generally conceded to be a fresh water sand until the Rogers discovery well proved otherwise, the operators and geologists contend that there are possibilities for the Trinity sand to be taken out of the fresh water class and added to the proven oil sand class in Texas. The Ellis County play is supposed to be on the Balcones fault zone.

C. P. Dodge Dies After Auto Smash at Memphis

Houston, Texas.—C. P. Dodge, secretary and sales manager of the southern division of The Texas Company since 1908, died Wednesday morning, January 13, in a hospital at Memphis, Tennessee, as a result of a fractured spine sustained Tuesday night near Memphis when the car in which he was riding careened into a tree beside the road. Mr. Dodge, who at the time of the accident was returning from a business trip to Memphis to catch a train for Houston, was accompanied by E. H. Cannon, representative at Memphis for The Texas Company, Mrs. Cannon, Lee Winchester, Shelby County official, and Mrs. Winchester. The other members of the party were reported injured but not seriously. Mrs. Dodge, who accompanied her husband from Houston to Memphis, where he was on a special business mission for the company, had left that city for Chicago prior to the accident.

The body arrived in Houston Thursday night. Funeral services were held Saturday afternoon at the Second Presbyterian Church of Houston.

Mr. Dodge was one of the oldest members of The Texas Company, having served in some capacity with the company since 1903. He came to Houston with the company in 1908 to serve in the capacity which he held at the time of his death. He is known all over Texas and was prominent in oil circles throughout the Southwest. He was 58 years of age. Surviving him are his wife, four sons, H. T. Dodge, Casper, Wyo.; H. W. Dodge, New York; P. C. Dodge, Jacksonville Fla.; and D. K. Dodge, Houston; and one daughter, Mrs. Kemerton Deane, Houston.

THE SINCLAIR trade-mark does more than identify oils of quality.

It symbolizes the ideals of our Company. It represents our ambition to co-operate with Sinclair dealers to attain mutual growth.

Sinclair dealers know that it also represents our obligation to maintain their prestige with a product as conscientious as their service.

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SINCLAIR REFINING COMPANY

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SINCLAIR OILS

CRUDE OIL PRICE QUOTATIONS

Current Postings

CALIFORNIA

Kern Rixer, Wheeler Ridge, McKittrick, Lost Hills, Coalinga, Newhall, Midway, Sunset, Elk Hills

	Jan. 20 1926
14 to 19.9 gravity	.75

La Habra, Whittier

14 to 19.9 gravity	.85
20 gravity	.87
21 gravity	.89
22 gravity	.91

Montebello

14 to 19.9 gravity	.85
20 gravity	.87
21 gravity	.89
22 gravity	.91
23 gravity	.94
24 gravity	.97
25 gravity	1.01
27 gravity	1.04
28 gravity	1.07
29 gravity	1.10
30 gravity	1.13

***Torrance, Richfield, Inglewood, Brea, Olinda, Signal Hill, Huntington Beach**

14 gravity	.85
15 gravity	.87
16 gravity	.90
17 gravity	.94
18 gravity	.98
19 gravity	1.02
20 gravity	1.06
21 gravity	1.10
22 gravity	1.14
23 gravity	1.18
24 gravity	1.22
25 gravity	1.26
26 gravity	1.30
27 gravity	1.34
28 gravity	1.38
29 gravity	1.42
30 gravity	1.46
31 gravity	1.52

*Inglewood and Torrance follow this posting through 28 degrees only.

Lost Hills, Midway, Sunset, Elk Hills

14 to 19.9 gravity	.75
20 gravity	.79
21 gravity	.84
22 gravity	.92
23 gravity	1.00
24 gravity	1.08
25 gravity	1.16
26 gravity	1.24
27 gravity	1.32
28 gravity	1.40
29 gravity	1.48
30 gravity	1.56
31 gravity	1.64
32 gravity	1.72
33 gravity	1.80
34 gravity	1.88

Coalinga, Wheeler Ridge

20 gravity	.91
21 gravity	.92
22 gravity	.93
23 gravity	.95

Wheeler Ridge

14 to 19.9 gravity	.75
20 gravity	.78
21 gravity	.81
22 gravity	.84
23 gravity	.87
24 gravity	.90
25 gravity	.93
26 gravity	.97
27 gravity	1.00

Coalinga

14 to 19.9 gravity	.75
20 gravity	.79
21 gravity	.84
22 gravity	.89
23 gravity	.94
24 gravity	.99
25 gravity	1.04
26 gravity	1.09
27 gravity	1.14
28 gravity	1.19
29 gravity	1.24
30 gravity	1.29
31 gravity	1.34
32 gravity	1.39
33 gravity	1.44
34 gravity	1.49
35 gravity	1.54

Signal Hill

31 gravity	1.52

Coyote Hills

14 to 19.9 gravity	.85
20 gravity	.88
21 gravity	.94
22 gravity	1.00
23 gravity	1.06
24 gravity	1.10
25 gravity	1.16
26 gravity	1.24
27 gravity	1.30
28 gravity	1.36
29 gravity	1.42
30 gravity	1.48

Santa Fe Springs

24 gravity	.97
25 gravity	1.05
26 gravity	1.13
27 gravity	1.21
28 gravity	1.28
29 gravity	1.34
30 gravity	1.40
31 gravity	1.46
32 gravity	1.52
33 gravity	1.60
34 gravity	1.68
35 gravity	1.76
36 gravity	1.84
37 gravity	1.93
38 gravity	2.00

Rosecrans, Dominguez

26 gravity	1.30
27 gravity	1.34
27 gravity	1.38
28 gravity	1.42
29 gravity	1.46
30 gravity	1.50
31 gravity	1.52
32 gravity	1.52
33 gravity	1.64
34 gravity	1.70
35 gravity	1.76
36 gravity	1.84
37 gravity	1.92
38 gravity	2.00
39 gravity	2.08
40 gravity	2.16
41 gravity	2.24
42 gravity	2.30

Fuel Oil

Richmond	1.04
El Segundo	1.00
San Pedro	1.00

EASTERN STATES

New York Transit	3.65
Bradford District	3.65
National Transit	3.55
Southwest	3.55
Eureka	3.50
Macksburg	3.30
Gains	2.95
Somerset medium	2.45
Somerset light	2.60
Cabell	2.35
Ragland	1.40
Corning	1.95

CENTRAL STATES

Illinois	1.87
Indiana	1.78
Lima	1.98
Plymouth	1.40
Princeton	1.87
Waterloo	1.00
Wooster	2.00

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

36 and above	2.05
33 to 35.9	1.95
32.9 and below	1.85

MID-CONTINENT

	Prairie	Sinclair Texas Gulf	Magnolia
Below 28			1.07
28 to 28.9 gravity		1.15	1.15
29 to 29.9 gravity		1.25	1.25
30 to 30.9 gravity		1.31	1.31
31 to 31.9 gravity		1.30	1.39
32 to 32.9 gravity		1.47	1.47
33 to 33.9 gravity		1.55	1.55
34 to 34.9 gravity		1.63	1.63
35 to 35.9 gravity		1.71	1.71
36 to 36.9 gravity		1.79	1.79
37 to 37.9 gravity		1.87	1.87
38 to 38.9 gravity		1.95	1.95
39 to 39.9 gravity		2.03	2.03
40 to 40.9 gravity		2.11	2.11
41 to 41.9 gravity		2.19	2.19
42 to 42.9 gravity		2.27	2.27
43 to 43.9 gravity		2.35	2.35
44 Baume gravity and above...		2.43	2.43

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran, Somerset and Big Lake crude

	Somerset (Grayburg)	Humble O. & R. Co. Texas Co.
28 to 28.9 gravity	1.15	1.15
29 to 29.9 gravity	1.25	1.25
30 to 30.9 gravity	1.31	1.31
31 to 31.9 gravity	1.39	1.39
32 to 32.9 gravity	1.47	1.47
33 to 33.9 gravity	1.55	1.55
34 to 34.9 gravity	1.63	1.63
35 to 35.9 gravity	1.71	1.71
36 to 36.9 gravity	1.79	1.79
37 to 37.9 gravity	1.87	1.87
38 to 38.9 gravity	1.95	1.95
39 to 39.9 gravity	2.01	2.03
40 to 40.9 gravity	2.07	2.11
41 to 41.9 gravity	2.13	2.19
42 to 42.9 gravity	2.19	2.27
43 to 43.9 gravity	2.25	2.35
44 and above	2.31	2.43

SOUTH TEXAS

Mirando (Texpata)	1.05
Mirando (Magnolia)	1.05

GULF COAST

Grade "A"	1.50
Grade "B" at Blue Ridge, Hull and Pierce Junction	1.25

LULING

Based on Contract	1.10

LOUISIANA-ARKANSAS

Caddo

38 gravity and above	1.95
35 to 37.9 gravity	1.85
32 to 34.9 gravity	1.75
Below 32 gravity	1.65

Homer

35 gravity and above	1.75
33 to 34.9 gravity	1.65
31 to 32.9 gravity	1.55
Below 31 gravity	1.40

(Continued on next page)

Cotton Valley

	Jan. 20 1926
All grades	1.10

Haynesville

Below 33 gravity	1.55
Below 33 gravity	1.10

Bull Bayou

38 gravity and above	1.75
35 gravity to 37.9	1.60
32 to 34.9 gravity	1.45
De Soto crude	1.80
Crichton	1.60
Bellevue	1.65
Jennings	1.50
Vinton	1.50
Edgerly crude	1.50

Smackover
(Standard, Gulf, Louisiana, Shreveport-El Dorado and Atlanta)

27 and above	1.30
26 to 26.9 gravity	1.25
25 to 25.9 gravity	1.20
24 to 24.9 gravity	1.15
Below 24 gravity	.85

The Texas Company

26 to 26.9 gravity	1.25
25 to 25.9 gravity	1.20
24 to 24.9 gravity	1.15

El Dorado

33 gravity and above	1.65
Below 33 gravity	1.55
East Field (Calion)	.85

Stephens District

26 gravity and above	1.40
Below 26 gravity	1.20

WYOMING-MONTANA
Wyoming

Byron	2.00
Ferris	1.28
Elk Basin	1.90
Gres Creek	1.90
Rock Creek	1.75
Lost Soldier	1.10
Lance Creek	1.90
Mule Creek	1.25
Notches	.65
Big Muddy	1.75
Osage	1.90
Hamilton Dome	1.55
Pilot Butte	1.50
Torchlight-Greybull	1.90
Lander	.85

Salt Creek
(Midwest Refining Company)

29 to 29.9 gravity	1.23
30 to 30.9 gravity	1.31
31 to 31.9 gravity	1.39
32 to 32.9 gravity	1.47
33 to 33.9 gravity	1.55
34 to 34.9 gravity	1.63
35 to 35.9 gravity	1.71
36 to 36.0 gravity	1.79
37 to 37.9 gravity	1.87

Montana

Sunburst	1.15
Cat Creek	1.90

NEW MEXICO

Artesia	1.35
Hogback	1.95

CANADIAN CRUDE

Oil Springs	2.45
Petrolia	2.38

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

Pending Legislation

The following bills with reference to petroleum and its products have been introduced in the state legislatures as indicated:

Massachusetts

Senate Bill No. 42, on which there will be a hearing on January 13, is a bill relative to notification of members of the legislature and others in connection with application for permits for the keeping, storage, manufacture or sale of gasoline. Referred to the committee on public safety.

House Bill No. 235 is a bill to provide funds toward the cost of construction and maintenance of highways and bridges by means of an excise tax on gasoline and other fuels used for propelling motor vehicles upon or over the highways of the commonwealth and to reduce the registration fee. Referred to the committee on joint ways and means.

Mississippi

Senate Bill No. 7 is an act increasing the tax on gasoline from three to four cents per gallon. Referred to the finance committee.

Senate Bill No. 18, introduced by Taylor and Mallet, is a bill providing for the allowance by certain counties of the use of the county's share of gasoline tax in payment on bonds.

House Bill No. 33, introduced by Guion, is an act providing for a tax on the sale of motor oils. Referred to the committee on ways and means.

House Bill No. 34, introduced by Guion, is a bill requiring carriers operating in the state to file quarterly reports with the state auditor, showing the number of gallons of motor oil delivered. Referred to the committee on ways and means.

House Bill No. 33, introduced January 17th, is an act imposing an excise tax on persons engaged in the business of distributing motor oils, providing for a method of payment thereof and distribution of funds derived therefrom, and fixing a penalty for violation. Referred to committee on ways and means.

House Bill No. 34, introduced by Guion, is an act requiring common carriers in the state to render quarterly reports to the auditor of public accounts showing the number of gallons of motor oil delivered to consignors and consignees, amounts of such shipments and dates thereof; providing penalties. Referred to committee on ways and means.

House Bill No. 57, introduced by Guion, is a bill amending the laws of 1924 in reference to disposition of the gas tax fund.

House Bill No. 95, introduced Jan. 12th by Misterfeldt, is an act providing for the leasing of 16th Section lands for gas and oil exploration. Referred to committee on education.

House Bill No. 100, introduced Jan. 12th by Kennedy, is an act providing for the exemption from taxation of artificial gas plants, pumping stations, pipe lines, etc.

New York

House Bill No. 201, introduced Jan. 14th by Cuvillier, adds new article, 12-a, to tax law, imposing tax of one cent per gallon on gasoline sold; 10 per cent of revenue to be retained by state. Referred to committee on taxation and retrenchment.

House Bill No. 223, introduced Jan. 14th, adds new article imposing tax of one cent per gallon on motor fuel. Referred to the committee on ways and means.

Senate Bill No. 21, introduced by Thayer, is an act to amend the tax law, in relation to providing for a tax on gasoline and similar motor fuel. Referred to the committee on taxation and retrenchment.

Pennsylvania

The legislature meeting in special session January 13th will consider, among other things, gasoline tax collection.

Kentucky

A house bill introduced January 14th by Holland is an act to increase the gasoline tax rate from three to five cents.

South Carolina

Senate Bill No. 701, introduced Jan. 12th by Duncan, is a joint resolution to require the state highway commission to turn over to state treasurer all the proceeds derived from the three cent tax on gasoline and to authorize the state treasurer to use the same for general purposes.

House Bill No. 26, introduced by Williams, is an act to provide for a system of hard surface roads by further defining the distribution of gasoline tax and fixing of automobile licenses. Carried over from last session.

M. H. Goode, vice-president and director of the land department for the Marland Oil Company of California with headquarters at San Francisco, has resigned and moved to Fort Worth to become a vice-president and director of the land department for the Marland Oil Company of Texas. The recent promotion of W. A. Moncrief, vice-president, to first assistant to F. Park Geyer, president of Marland of Texas, created the vacancy that Goode is to fill in the Texas organization.

Showing of Second Completion Discounts Bradley Prospects

Shreveport, La.—The hopes of Louisiana and Arkansas oil operators for a new oil field at Bradley, in La Fayette County, Arkansas, were lowered considerably by the receipt here today of a report to the effect that the Arkansas Fuel Oil Company found only salt water with a slight showing of oil in testing its second well in that vicinity. This latest test was made in the well located on the property of the Red River Lands Company, near the southeast corner of the northwest quarter of section 18-19-24. A sand encountered at 2788 feet was penetrated to a depth of two feet. The fluid was bailed down to a depth of around 1000 feet, below which it could not be lowered. Preparations are being made to swab it, in the hope of increasing the slight showing of oil which is apparent.

Allen No. 1, the discovery well, is pumping around five barrels of oil per day, along with a considerable quantity of salt water. Drilling is still in progress in Allen No. 2, which is located in the northeast corner of the northwest quarter of section 19-19-24.

The Pure Oil Company is said to have paid a total of $20,000 consideration for leases covering 640 acres of land located in section 25, 30 and 32 of township 18-24. The Sun Company is said to have paid at the rate of $80 per acre for two 40-acre tracts located in sections 12 and 13, of township 19-25. Two 40-acre tracts located in section 11 of the same township were acquired by the same company at a price of $50 per acre.

White and others are drilling at 2240 feet in their Roper wildcat, located in section 27-16-23, of the same county.

Latest reports from Stephens, where the Buffalo Oil Company recently brought in a producing oil well from the Nacatoch sand at a depth of 1540 feet in its Morgan well, in section 22-15-19, about two miles east of the nearest Blossom sand production in the Stephens field, indicate that Mose Gossett has encountered the top of the Nacatoch formation at around 1476 feet in his Thompson No. 1, located about one-half mile southwest from the discovery well. The crew is coring and ratholing carefully, in search of a casing seat.

The discovery well continues to make around 50 barrels of heavy oil per day, accompanied by large quantities of gas and salt water, when permitted to flow. Sand particles borne by the escaping gas cut the well's connections within a short time after they are repaired, which makes it necessary to close the well in several times a week.

C. W. Robinson, of Shreveport, is coring at around 2300 feet in his Toner wildcat, located in section 29-12-23, Hempstead County, about five miles east of Hope and about 15 miles northwest of the Irma field.

Hopes for an extension to the old El Dorado field, raised during December by the completion of a small flowing well drilled by Raines and others on the Dumas tract, in section 9-17-16, Union County, were lowered last week by the failure of tests made by E. M. Jones, J. D. Reynolds, and Owen and others in wells located in sections 8, 15, and 4 of the same township. E. M. Jones is preparing to abandon his Dumas No. 1, located near the center of section 8-17-16. J. D. Reynolds bailed dry, with a slight showing of oil, at a depth of 2160 feet in his Dumas well, located in section 15. Owen and associates bailed dry at 2131 feet in their Porter No. 1, in section 4, which was thereupon drilled five feet deeper. The second test, made at a depth of 2136 feet, yielded a slight showing of oil. Preparations are being made to try a shot of nitroglycerine. Ravenger and others have cemented 6⅝-inch casing at 2056 feet in their Dumas No. 1, located in section 9; and the test will be completed some time this week.

The Simms Oil Company is drilling in lime rock at 3395 feet in its Moseley wildcat, in section 19-10-11, of Cleveland County. The Magnolia Petroleum Company is coring at 3580 feet in its wildcat test on the property of the Calion Lumber Company, in section 29-15-14, Calhoun County.

With the exception of a report to the effect that the Beckman well in section 25-10-1e is still paying off at the rate of 250 barrels of oil per day, latest reports from the Urania District, in La Salle Parish, Louisiana, have been distinctly unfavorable. Dry holes were completed by the Natural Gas & Fuel Corporation and by Jones and others at locations in what would have been accepted as proven territory in the southwest quarter of section 24-10-1e. Both wells were drilled to depths of approximately 1600 feet, although neither well encountered the pay sand that is found in other wells at shallower levels. The Louisiana Oil Refining Corporation drilled into a salt water sand at around 1600 feet in its Tremont Lumber Company No. 2, located in the southwest corner of section 29-10n-23, thus limiting the field in the southeasterly direction.

The Gilliland Oil Company is rigging up to drill deeper in its Bond No. 3, located in section 15-23-8, near the center of the Haynesville field, in Claiborne Parish.

Arkansas Attorney Files Oil Conservation Suits

El Dorado, Ark.—Walter L. Brown, district attorney, filed a suit in the circuit court here last week asking that a penalty of $1000 per day be assessed against the Keen & Woolf Oil Company, of Shreveport, for every day of violation of the state conservation laws in the operation of the Murphy No. 4 well, located in the southeast quarter of the northwest quarter of section 9-16-15, Smackover district. It is alleged that the Graves sand was penetrated in this well without proper casing, and that the company has "wilfully permitted oil and gas to escape from the Graves sand from said well, although ordered by the Conservation Department of the State of Arkansas * * * to shut it in."

In discussing the alleged waste of gas in the Smackover district, Assistant District Attorney G. W. Jones, who is handling his suit in the absence of his chief, stated that "* * * the needless waste of natural gas must be stopped. Similar steps will be taken in regard to any other violators upon due recommendation of the Conservation Department."

A hearing is to be held today before Chancellor LeCroy at Camden in connection with injunction suits filed by conservation authorities in Second Division Chancery Court on January 7, last. Injunctions directed against the Lion Oil & Refining Company, the Natural Gas & Fuel Corporation, the Woodley Petroleum Company, the Unity Petroleum Company, and others are to be sought for the purpose of forbidding the use of natural gas for "blowing" oil wells.

Buys New England Properties

Shreveport, La.—R. B. Kahle, president of the Louisiana Oil Refining Corporation, announced Saturday that his company has acquired a substantial interest in the stock of the Beacon Oil Company, of Boston, Mass. C. M. Leonard, chairman of the board of directors of the Louisiana Oil Refining Corporation, has been elected to head the directorate of the Beacon Oil Company, and R. B. Kahle has been elected a vice-president of the latter company.

The Beacon Oil Company is a refining and marketing company, having an extensive retail distribution of gasoline through its own filling stations and tank wagons in Massachusetts and Connecticut. The Beacon's refining plants at Everett (Boston Harbor), Massachusetts, include a modern cracking plant and an asphalt plant with a combined capacity of 14,000 barrels of crude per day.

Things to Be Considered in Logging Wells Rotary Method

Co-operation with geology in getting information requires exact knowledge of depths

By Harry Pennington
Mechanical Engineer

THERE will come a time in our country when all the excellent appearing structures, visible from the surface, that might contain oil, will have been searched out and drilled. Each prospect hole on such structure that does not produce oil reduces our possible oil bearing areas by just that much territory—that is, to the depth penetrated, for depths continually increase.

The next step that is now being taken by a number of major operators is to explore underground in search of submerged structure; submerged being used in the sense that structure, once visible at the surface has been either eroded or covered by subsequent depositions and made invisible.

Geologists and paleontologists are becoming adept along the line of defining subsurface structure, and the driller who lends his efforts to these new methods, by furnishing exact, detailed information in his log is best capable of handling prospect holes.

To define subsurface structural conditions, a key bed is chosen by the geologist, either from lithology of formation or by paleontology, using the fossils that are brought up in cuttings and in cores. One hole to this key bed defines its elevation at that point; another hole, half a mile away, defines a line on the key bed, while a third hole, say at the points of an equilateral triangle with half mile sides or more, fixes three points on the key bed and from these the dip and strike of the bed may be determined. And with this information, the geologist may require further wells, up the dip, and a structural high or other condition that would trap oil might be located and then a deep test drilled to locate formations that might bear oil.

Value of Logs

Few formations have no dip, or, stating it in a different way, practically all formations have dip or slope, consequently, practically all areas of sedimentary deposits are prospective oil areas. And while all the wells are being drilled in the search for oil and all the vast sums of money expended, the writer adds this paper with the idea of impressing it upon the driller that logs of wells are valuable, not only for today, but for future use, and to set out the reasons, and then to outline the common methods of logging, pointing out an improvement here and there, so that all purposes of a log may be served.

When the writer learned rotary drilling, before going to college, we had coffee pots for boilers and pin wheels for rotaries, but made big wells with high pressures, somehow, without any thought of logging the well except at the depth the shoe was set. And when the owner of the well requested a log the whole crew repaired to the tool house and made up a log from memory.

But as in all similar things, science has come into the field, to the benefit of all concerned, and we now must make up logs that have definite purposes. All of the mechanical purposes of well making must be served, and all of the requirements of geologists and paleontologists must also be served, and a log of today takes on an entirely different aspect from a log of twenty years ago.

For the purpose of this paper, I have divided logs into two types—mechanical logs and geological logs—and obviously will deal with the mechanical log of wells only, but with the idea of fixing it in the minds of our experts in drilling and in geology, that one log is just as necessary as the other, and that the purpose of a prospect well has not been realized until a complete, perfect mechanical log and a complete, perfect geological log is had, whether oil is found or not.

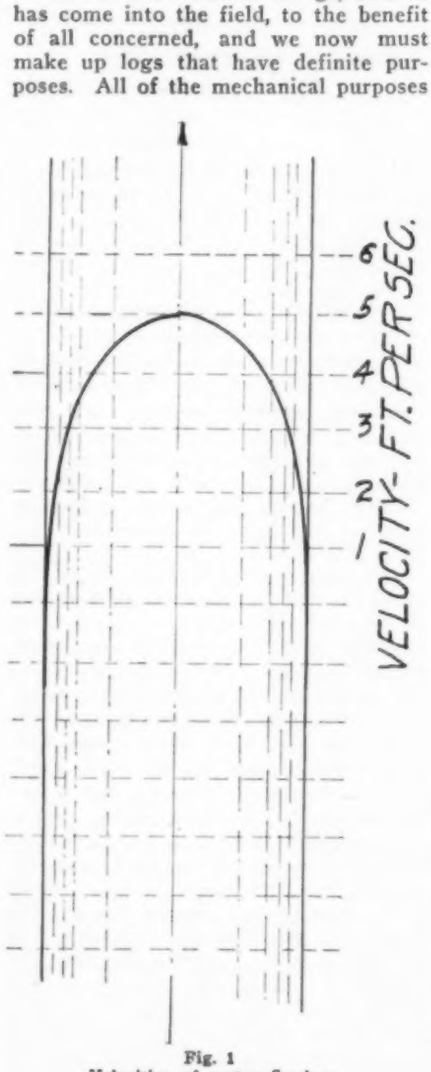


Fig. 1
Velocities of water flowing in a pipe

The Mechanical Log

The driller makes the mechanical log as the well is drilled and this is required, consequently, every well today has a log. But not all operators employ the staff to make geological logs of wells, and geological logs are therefore not made as frequently.

The mechanical log is necessary, useful and very important in the making of wells and maintaining of wells. In this part of the record of a well, all of the mechanical features of formations penetrated should be carefully described. By mechanical property of a formation is meant:

Material
Hardness
Color
Texture
Friability
Toughness
Thickness
Water content
Gas content
Oil content

And a careful, exact designation of the character of the formation. It is possible to ascertain these characteristics of formation only directly at the time the well is being drilled, for it is quite impossible to remember all of the many changes of formation encountered in the making of a well.

And the log should so describe each formation, mechanically, that any other driller on another well can identify the same formation, whether he finds it at a higher or lower elevation.

Of course, the existence of definite markers, like the Austin Chalk, the

Mississippi Lime, can be remembered, and the driller could never fail to identify these, but there are oil bearing formations above and below these two, and it is these that are sought. When each and every change in formation is identified and logged as carefully as implied in this paper, there is no possible chance of passing through an oil bearing formation without detecting it, even though cores may not be taken.

Logging of Boulders

The writer noted last year that a prominent geologist questioned the advisability of including in well logs the mechanical properties of formations, citing boulders as a useless inclusion. For mechanical purposes, boulders should be included in every log of a well, for they are a menace, as will be noted. Boulders are difficult at times to drill with the rotary, and twist off may occur; boulders are not suitable for a casing seat for a shoe set on the edge of a boulder is sure to leak and allow water to come into the hole from above; while drilling below, a boulder may drop into the hole alongside of the drill pipe and stick the pipe, and if the location of boulders is placed on the log of the well, fishing may be expedited. For instance, the writer had a derrick to blow down, and upon starting up again found the drill pipe stuck and securely fast in the hole, resisting all efforts at turning, pulling or driving down. Examining the log, boulders were shown at 1200 feet, so an equal length of large pipe was brought on to the job for going over the drill pipe with a rotary shoe. A hard pull on the drill pipe also indicated, by the amount of stretch in the drill pipe that it was stuck at about 1200 feet. Running the large pipe over the drill pipe, a boulder was struck at 1210 feet, and the drill pipe immediately loosened.

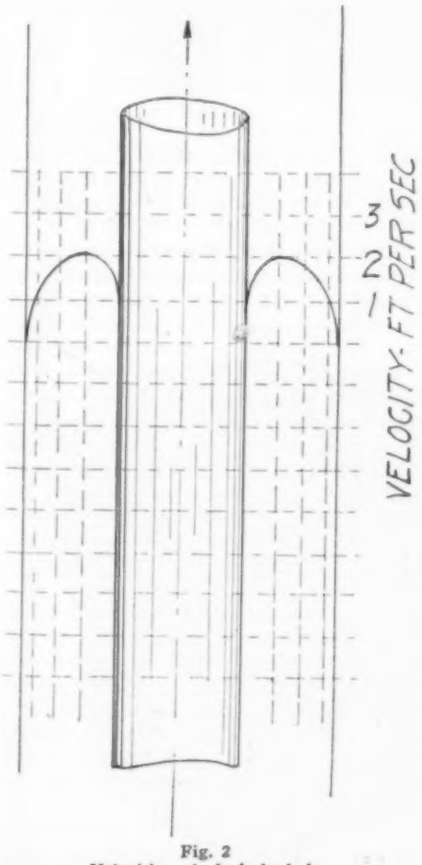


Fig. 2
Velocities of slush in hole

The mechanical properties of formations can be used for defining keybeds also. Those same boulders in red gumbo were found in many wells, all wells of the same field, as a matter of fact, and were just as good a marker as could be found in the entire log of the wells.

While a geological log of a well is a necessity, in the light of present day oil finding and field development, still the geological log is just about as useful to a driller as a tack hammer, for it serves no mechanical purpose in the making of wells; on the other hand, the mechanical properties of formations might be even of less value to the geologist, but, each for its purpose, a log should carry every item of information that can be added to it by the driller and by the geologist, and the purpose of this paper is to emphasize to the driller the value of this procedure.

Keeping the Records

Logs are valuable property. Our major operating companies endeavor to secure logs of all wells drilled, and at great expense. Thanks to their vigilance, and their generosity, when a prospect hole is started, the owner can usually find information covering the subsurface in the locality from wells previously drilled up or down the dip or along the strike, and in that manner prospecting is made somewhat safer, although the term "safe" would hardly apply to prospecting as yet, either in making the well or in finding oil.

Logs are carefully made up in the office, tabulated, indexed as to name of owner and locality, and kept for future reference, and some operators maintain duplicate files for preventing the loss of a record of a well, by whomsoever drilled. Logs may be found carefully written in a large book, a book that looks as big as The Doomsday Book, if anyone has seen such.

The use of logs of old wells might be illustrated by using the Mexia field as an instance. The writer understands that the production from the Woodbine sand was located by defining the structure from wells drilled in the old shallow Mexia gas field, years before a deep test was made on the same locations, deeper down. By using the depth to the top of this upper gas sand, making the gas sand a marker or key bed, using its mechanical properties as set out on logs, as a means of identifying its elevation, subsurface conditions were defined, resulting in a prolific, deep field discovered with rotary tools, much to the credit of those concerned with the same.

And just recently the discovery of production in serpentine, at Lytton Springs, near Lockhart, Texas, has led to the examination of all other available logs of tests drilled previously in the district for the purpose of locating other production in the same formation, for it was undoubtedly a stray, and not looked for by any one when the well was started drilling.

And, remembering that wells are drilled for the purpose of finding oil, a log that is most valuable is one that will serve geology, paleontology, stratigraphy, as well as the art of making future wells in the same locality, should oil be found, and if oil is not found in the well being drilled, then to serve a useful purpose in making wells to deeper horizons at the same location, and also in the making of wells at other locations nearby, and at still other locations distant, along the strike of the same formations.

Hence, the driller that is most proficient in the making of wells termed prospect holes, and also wells in proven fields, is the one termed in the field, "a good formation man."

Constructive Geology

Our friends, the geologists, are to be complimented on the constructive work done in the past few years, in identifying on a large scale the various most productive formations; that is, when a sand has been productive in one locality, like the Woodbine, or the Yegua, and when certain geological horizons like the Pennsylvanian, have proven prolific, thees same formations have been traced both along their strike and to greater depths, and a better measure of depths that should be penetrated is had.

A few years back, a test to the Aus-

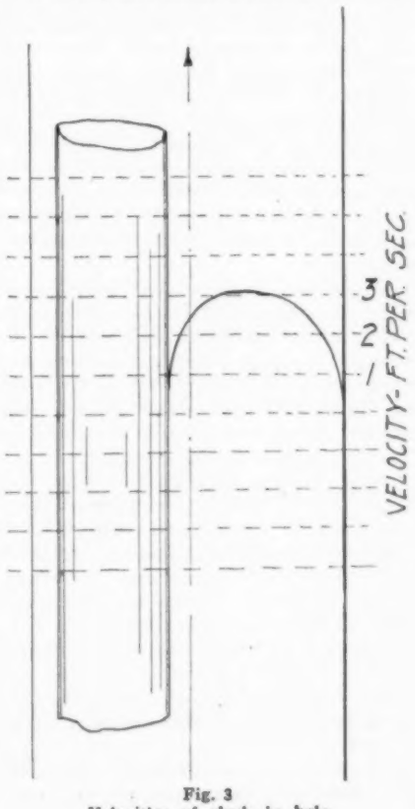


Fig. 3
Velocities of slush in hole

tin chalk was termed a final test, and when this formation was penetrated the operator forthwith abandoned the hole. But, discovery of production in the Woodbine, below the Austin chalk, made a final test depth greater, and recently, discovery of production in the Trinity sand has increased the possibility of production being found below in the older fields in this formation lower down.

Accurate logging of wells both mechanically and geologically has been of material assistance, for once the geologist has defined the dip in the region it is quite an easy matter for him to compute the approximate depth that certain formations that might carry will be encountered at a definite location, and preparation can be made in both the size of hole started and the drilling equipment moved on to the work to reach the predetermined depth.

With all the foregoing in view, the writer has prepared the following, not from the standpoint of geologist or driller, but from the standpoint of the operator-producer of oil, for, although a discovery well may be variously claimed, the fact remains that the one meeting the pay rolls and supply bills is the real discoverer of a new pool, with drillers, geologists and engineers simply as purveyors to the discoverers.

Confusion of Terms

As important as the subject is, there has been no great effort at standardizing the designation of formations by drillers. The characteristics of formations are set down on the daily drilling report by the driller, who uses the best light that is before him. The writer finds that the same formations are sometimes given various names, and the degree of care taken in describing the formations always marks the knowledge of wells exhibited by the driller. Sticky shale, clay, soft gumbo, may be used to designate the same formation, but a general standard of nomenclature would make each of these terms applicable to only a formation exhibiting definite characteristics, mechanically.

Geologists, with much labor, have gradually arrived at definite terms for the various geological horizons, although in some cases recognition appears to be difficult. These terms could be termed standardization, and the method of standardization has been to use the various fossils peculiar to each formation that may be found in cuttings and in cores. And, since there are a great many more drillers than there are geologists, and the training of drillers has been more diversified, the necessity for definite nomenclature, mechanically, is further emphasized.

Logging of wells using the standard tool system of drilling is done on another basis, mechanically, than the logging of wells with the rotary system. A formation that would be termed hard with the rotary might be termed usual with standard tools. Standard tool drillers use the term shale to designate formations that might be divided into shale, clay and gumbo, by the rotary driller, because the three latter designations are used for distinguishing the mechanical properties of the three formations.

Logging of wells by the standard tool system is a comparatively easy matter, though, compared to rotary drilling, for the standard tool driller digs up some of the formation, bails it out immediately, and we then have it in our hands where we can see it, while the rotary driller must be careful in identifying the particular cuttings that came from bottom. The skilled rotary driller, though, can log every change of formation instantly and can determine every feature of a formation, nature, hardness, texture, and so on, excepting color, of course, by the nature of the drilling and the behavior of the equipment. And, for the benefit of those who may doubt this statement, the writer will endeavor to outline some of the indications that are customarily used in rotary drilling. However, all drillers do not use the same indications, but those from one section of the country, accustomed to the equipment and the formations of that section, will use various and different indications from another section.

Coring

Coring is not referred to in this paper, for it is a subject all by itself. The subject is confined to the determination of formations mechanically and by cuttings. The writer fully believes though that with perfected methods, that is, methods that are not as expensive as those in use today, all prospect holes will be cored at a time not far distant, and that these cores will form the basis of more exact definition of subsurface conditions, mechanically as well as geologically, and that when a hole is termed dry it will be good and dry. That is to say, all wells will be cored continuously as the hole is drilled and a section brought up and laid out in full view of all formations penetrated. This is not an impossibility commercially, and is being done in a few cases, but at much expense.

Many operators core at regular intervals, say fifty feet, while other operators core every break in formation when nearing a horizon that might prove productive, or that might be used for defining subsurface structure. Another practice, particularly in localities where numerous sands are found at intervals, is to "rathole" or drill a small hole ahead of the large hole, during the day time to better ascertain if oil is encountered and to locate markers and to hold a seat for casing and to ream this small hole to full size during the night, resuming the smaller "rat hole" again the next daylight shift.

And still other operators drill wildcat tests only during daylight.

All of these methods are conducive to safety, and all of them serve in a measure the requirements of geologists. And let it be understood here that the purpose of this paper is to outline average present day methods, except coring and improvements with the view to better serving both geology and the mechanical requirements of wells.

Indications of Formation Changes

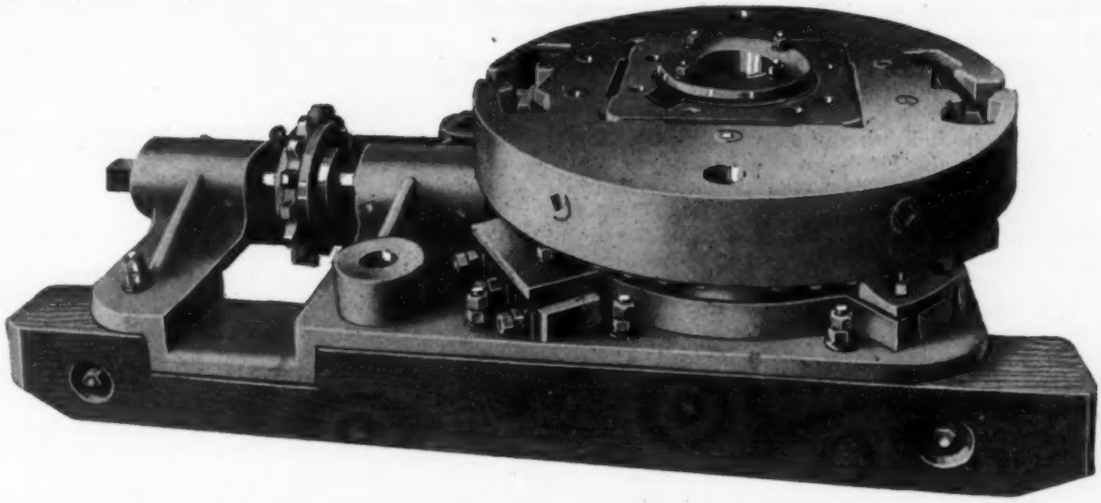
As to depth. Since drill pipe is made up into "stands" of two, three, four or five joints of pipe, with a tool joint pin at the bottom and a tool joint box at the top, these are measured to exact length. The kelly joint is marked at intervals of one foot, in Roman numerals, hence, the depth at which the bit is cutting is measurable very closely. Drill pipe has some elasticity, though, and a string 3000 feet long will stretch some twelve to fifteen inches when suspended in the hole, and the measurement might be in error a like amount, but this is far closer than can be measured by flagging with a wire drilling line, "andy over" the crown block sheave. An error of eighteen inches in 3000 feet is not serious at all, and since this is the only source of error, stretch in drill pipe is never considered in fixing the depth.

The rotary itself indicates the character of formation being drilled; in rock, the fishtail bit will catch and let go, catch and let go, bouncing the rotary table, so that there is no difficulty at all in determining rock. The drill pipe will wind up and, if the bit lets go the table will whip forward. Some formations of this kind will make the rotary sound like a train of box cars being bumped by a locomotive, particularly when the bit is sharp. When the bit dulls, the operation of the rotary table smooths out and quiets down and the bit will go no more. The weight let down on rock is greater than in any class of formation and the hardness of all formations is gauged by the weight required.

The chain driving the rotary, and the chain driving from engine to line shaft is an indication of the smoothness of drilling, whether it is rock, shale, gumbo, slate, clay, oil sand or oil sand rock. One old-time driller in the writer's employ used the chains largely, and one day two new helpers took out two links of the rotary chain, making it tight, while the driller was at lunch. Starting up, this driller noticed the tight chains immediately, and demanded the two links back, for this was his method of logging, using the whip of the chain.

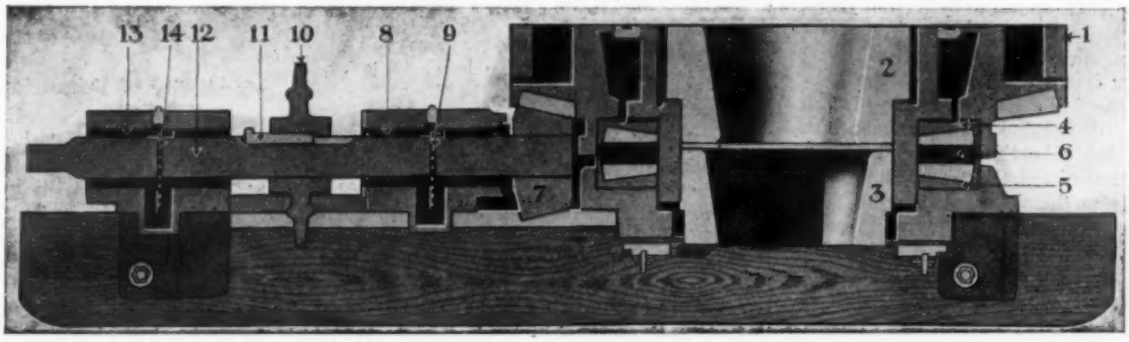
The traveling block is an indication of weight let down. When the weight on the block is light, the block will gently sway back and forth, along the plane of the sheaves, through the center of the ropes, but when the weight suspended on the block is great, it will hang rigidly, without motion as described.

The weight let down is an indication of hardness of formation, in every case,



Caddo Special No. 6 All Steel Make and Break Rotary

Above view shows our No. 6 Break out Rotary with Kelly Driver in place ready for drilling. Weight of Rotary 7000 lbs. Solid boxes cast as part of rotary bed. Bronze Bearings. Chain oil feed lubrication. 3 15/16-inch pinion shaft. A 21-inch drill bit and 15½-inch casing will pass through rotary table. Make up or break out all size drill pipe. Make up all size casing including 12½-inch with slips. Grief Joint Driver has removable inserts which can be replaced at a very low cost, this giving you same as new driver.



Cross Section of Caddo Special Breakout Rotary No. 6

You will note from cross section that one of the underlying features of our rotary is the small number of parts. There is only fourteen parts to our rotary. Note simplicity of Make and Break feature. Part No. 3, lower slip ring, is seated on bed of rotary. Slips are placed in same holding the pipe while the tongs are suspended on the table thereby enabling the driller to make up or break out the pipe by applying the power through the rotary.

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A Control Drilling Head

"Positive insurance against dropping anything in well while drilling or when going in or coming out of hole."

The head is screwed on surface casing. Drill bit is permitted to pass through head by opening ports which is done by a lever from derrick floor. An automatic arrangement to guide the bit through the opening without stopping.

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Say you saw it in The OIL WEEKLY

and once a hole is started, the driller soon begins to determine hardness, for these indications vary with the size and weight of drill pipe, diameter of hole and depth.

The engine exhaust, indicating the power required to turn the bit, is another indication of hardness, stickiness, toughness of formation, as, with heavy load, the steam valve is opened more and the exhaust sounds louder. In the drilling engine, as all of us know, the slide valve is controlled by a reverse link, and the valve travel is always maximum, usually three-quarters or seven-eighths cut off, and admission of steam is by throttling, using an ordinary angle valve with telegraph cord control.

The bevel gear set of the rotary is another indication of load, for when lightly loaded, the sound emitted by meshing gears and backlash is less than when heavily loaded. Heavily loaded gears give out a heavier, more resonant noise than lightly loaded gears.

The Drill Pipe

The drill pipe itself, is a "feeling rod" from the surface down to the bit, and, in direct contact with the drive bushing, and through it, with the rotary table, the sound, vibration, of a bit cutting is transmitted from the bottom of the hole to the rotary table, with the drill pipe as the medium. Sound is but vibration; sound is more readily transmitted through solids, and the drill pipe being of very solid material a perfect means of sound transmission is always available. By this means, the texture of formations may be determined closely, for coarse, hard sand drills in quite a different manner from finer texture slate, or shale, of the same degree of hardness. Even lime rock may be distinguished from sand rock by this means, for the sound transmitted through the drill pipe is, in most rotaries, magnified by the table itself—the table of most rotaries possessing the quality of resonance. Even though there may be the hum of meshing gears, the rattle of chains, the puff of the engine and pump exhaust, the lower sound of the rotary table is easily distinguishable from all other sound usually present while drilling, for one sound may travel through space and be received by the ear regardless of how many or how much other sound is travelling through the same space.

Loose sands are detected instantly, for when the bit goes out of an upper formation of any kind and enters loose sand, weight sinks the bit instantly.

Shales drill easily, for the most part, and the rotary runs smoothly, but, when going out of shale into a sand rock containing oil, the oil content seems to lubricate the bit, and the rotary then operates still more smoothly, settling down to quiet running even if the formation is hard and there is no chance of mistaking such formation, unless, of course, the driller is very unskilled or is unfamiliar with this class of oil bearing formation.

The advent of the rotary into new territory sometimes requires that a few wells be drilled to familiarize drillers with the territory and the peculiarities of formations, in the same manner that standard tool drillers can make a second well better than the first, in the same territory. But, with proper care, there is no reason whatever that the first well cannot be finished perfectly, for our tools and methods of today are far advanced from those of ten years ago.

Measuring Hardness

The drilling line has elasticity and many drillers use this as a measurement of the weight let down; drill pipe also has elasticity and the measurement of weight let down on bottom may be had by gauging the amount of pipe that can be let down into the hole after the bit has touched bottom, and then using a percentage of this to represent the weight of pipe resting on the bit, and the remaining weight that is being suspended on the travelling block, and from this weight, the hardness is ascertained, but in relative terms of course, for there has not been any standard set up for measuring the hardness of formations such as is in use in the measurement of hardness of steel.

Usually, when the hole is deep, say 4000 feet, the drill pipe is smaller than used in the shallower holes. It is not infrequent that three-inch drill pipe is used for holes deeper than 4000 feet. And, drilling rigs for this depth being large, and heavy, some of the sensitiveness of light rigs used for shallow holes is lost, and more skill is therefore required in deep hole work to log accurately. As a matter of fact, with any class of drilling equipment, deep well drilling requires greater skill in handling tools, and with this greater skill is usually found the necessary ability to log accurately at these depths also, although a few may set the drill pipe on bottom, raise up twenty feet, and then feed off slowly while rotating, to detect when the bit begins digging, especially with heavy rotaries and large drilling engines and draw works, and exactly like a deep hole standard tool driller pulls up line to determine when his bit is leaving bottom.

Due to the care necessary at these depths, greater sensitiveness is set up, and logging may be done quite as accurately by the skilled. Drilling at these depths is done more carefully anyway and slowly, and additional time is afforded for correct determination.

The drilling pump, steam driven, will indicate the entrance into formations that are sticky and that tend to ball up in the hole. When a pressure gauge is not used, the pump exhaust will indicate in a measure the drilling pressure; in a tough gumbo stratum with a balling up hole, the "chow chow" of the exhaust is markedly of greater volume than when the hole is clean. With a pressure gauge, formations that tend to fill the hole above the bit and cause a rise in pressure are denoted immediately by such pressure. Formations that cause a pressure rise are gumbo, clay, sticky shales while such formations as soft rock, ordinary shale, slate, sand rock, packed sand, loose sand, gravel, boulders, are drilled with lower pressures.

If the hole, though, is allowed to fill at the bottom with cuttings, due to insufficient circulation of slush to carry such cuttings to the surface, the pressure will rise. In a large hole, cuttings accumulate at bottom more than in a small hole, and pressures in a large hole may be more than the pressures in a small hole, with the same size drill pipe, although the friction of fluid up the hole is less in the larger hole.

These are some of the indications of formations and formation changes while drilling; the training of a rotary driller is along these lines of identification of formations, in addition to handling the drilling equipment and making hole, and, since there is no substitute for experience, the apprenticeship of drillers usually extends over several years, during which he may assist in drilling in many localities.

Similarity of Formations

Generally speaking, every district has its great markers below the surface, but in many cases, these are far below the surface, and while drilling to them, the bit may be passing through formations of the same general nature, such as clays, gumbo, shales, sands, gravel, of varying thickness, without any material difference in color, texture, hardness, or any other characteristics, but, at the same time, the geological horizons passed through may be continually changing.

The writer has drilled wells in such formations as the Lagarto, Oakville, Corrigan, Frio, Fayette, and so on, without detecing any difference whatever in the general character of formations, while the cuttings, in the hands of paleontologists, revealed to them the thicknesses of these formations, and from them, the approximate depth at which productive horizons might be expected, were obtained. For mechanical purposes, these geological names have little significance, but for oil finding purposes, they have assumed the greatest importance, due to the painstaking work of our friends, the geologist and the paleontologist. As time passes, and further development is made, these designations of formations and the identification of them will have still greater importance. But, at the same time, oil is found by the drill in the hands of the experienced, and as noted before, there is no substitute for this.

There are many parts of our country that can be drilled with either standard

(Continued on page 66.)

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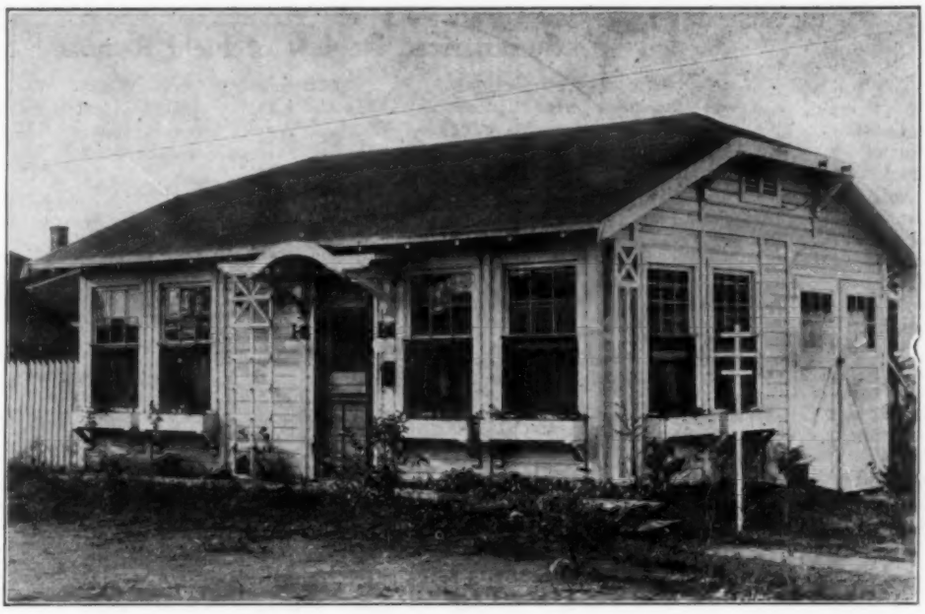

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COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	19	29	11	12	2	1	6	16	1,155	715
California	17	15	16	14	..	..	1	1	11,742	4,225
Colorado	..	..	..	..	..	..	....	....	....	....
Indiana	1	10	..	3	..	3	1	4	....	34
Illinois	4	13	3	9	..	..	1	4	53	1,207
Kansas	24	27	14	15	..	2	10	10	1,975	1,445
Kentucky	25	30	13	21	1	..	11	9	131	220
Louisiana	13	11	8	6	1	3	4	2	335	187
Michigan	..	..	..	..	..	..	....	....	....	....
Mississippi	..	..	..	..	..	..	....	....	....	....
Montana	5	6	4	5	..	..	1	1	240	475
New York	7	7	7	7	..	..	....	....	24	27
New Mexico	3	2	3	2	..	..	....	....	225	140
Ohio	42	29	14	18	17	..	11	11	154	350
Oklahoma	101	65	52	34	14	5	35	26	9,536	4,748
Pennsylvania	39	41	32	33	6	5	1	3	102	149
Tennessee	..	..	..	..	..	..	....	....	....	....
Texas	104	92	71	48	7	3	26	41	16,633	16,214
Utah	..	..	..	..	..	..	....	....	....	....
West Virginia	13	31	7	11	6	17	....	3	125	197
Wyoming	15	4	15	2	..	..	....	2	2,140	365
Totals	432	412	270	240	54	39	108	133	44,570	30,698

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

California

Company, Well and Location	Initial Production Bbls.	Depth
Long Beach—		
A. J. Delaney's Cerritos 5	1600	4364
W. R. Ramsey's Municipal 6	500	4331
Repetto Hills Oil Co.'s No. 3	325	4319
Athens-Rosecrans—		
C. C. M. Oil Co.'s Bilhorn 1	*	6000
Pacific Pet. Corp.'s Schollenberger 1	980	5257
Baldwin Hills-Inglewood—		
Standard Oil Co.'s L. A. I. 1-34	410	2191
L. A. I. 1-35	440	2337
L. A. I. 1-36	640	2365
L. A. I. 1-37	858	2340
Torrance—		
General Pet. Corp.'s Carson 6	33	3400
Montebello—		
St. Helens Pet. Corp.'s No. 10	250	3708
Midway District—		
General Pet. Corp.'s Government 24	6	2440
Honolulu Cons. Oil Co.'s No. 54	200	3000
North American Oil Consolidated's No. 27	150	4526
No. 32	250	3983
Pacific Oil Co.'s No. 50	100	4170
Ventura Avenue—		
Associated Oil Co.'s Lloyd 21	4000	5832

Texas

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Jack Abernathy et al L. F. Wilson 2	*	1658
Roy I. Carter et al J. R. Parkey 3-B	*	1743
Consolidated Oil Co. Hawley 1	*	1852
Empire Gas & Fuel Co. L. F. Wilson 16-B	25	1603
Golding-Cochran et al Lauster 1	*	1225
Gulf Prod. Co. P. Siegel 10	45	890
A. P. Nichols 20	50	1554
A. P. Nichols 21	75	1552
J. F. Rogers 11-A	*	1389
E. S. Monohan 24	15	1304
W. T. Richardson 8-A	25	1461
W. D. Hill et al Hutcherson 2	25	1399
Hutcherson 3	65	1390
Hutcherson 4	125	1390
Humble & Marland Oil Co. Richardson 3	*	3592
Magnolia Pet. Co. A. J. Lowe 20	20	1337
Major Pet. Co. Cowan 3	*	1461
W. E. Maxson et al L. F. Wilson 15-B	110	901
Murchison-Fain Oil Co. Hayter 1	*	1500
McClure 1	*	1340
Geo. L. Pace et al J. B. Miller 1-C	*	1654
Pandem Oil Corp. Hutcherson 4	125	1380
Primrose Ref. Co. & Pet. Prod. Co. Wolf 2	125	1355
Riner-Bailey et al L. F. Wilson 29-B	*	1675
Staley-Wynne et al Parrish 2	100	1574
T. P. Coal & Oil Co. L. F. Wilson 1-A	50	1597
Texhoma (Continental) O. & R. Co. Oldham 6	250	1338
Oldham 7	45	1333
Oldham 8	35	1370
Trio Prod. Co. M. Brom 10	50	1420
M. Brom 11	5	1432
White Eagle O. & R. Co. L. L. Marcell 1	*	1635

BURKBURNETT

Company, Well and Location	Initial Production Bbls.	Depth
Cozy Oil Co. F. P. Warren 9	3	195
A. D. Robinson et al J. E. Roller 21	25	1181

CLAY COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Lone Star Gas Co. Holloway 17	20	1715
Holloway 18	25	1691

ELECTRA

Company, Well and Location	Initial Production Bbls.	Depth
Culberson Co. Waggoner Bros. 33	20	1509
Dale Oil Corp., Jennings 19	*	2000
Gulf Prod. Co. J. L. Waggoner 2-F	22	1283
Tank Farm Fee 5	*	870
T. F. Hunter et al Waggoner Bros. 8	20	1510
Magnolia Pet. Co. Rio Bravo 52	20	2155
Pois-Kruger et al Waggoner 11	*	1860
Ryan Pet. Corp. Henson 1	*	1845
Texhoma (Continental) O. & R. Co. Burnett 4-M	15	1538

K-M-A AND IOWA PARK

Company, Well and Location	Initial Production Bbls.	Depth
K-M-A Oil Co. Munger 24	25	1235

MONTAGUE COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
The Texas Co. J. W. Maddox 1	¶35	934

SOUTH VERNON

Company, Well and Location	Initial Production Bbls.	Depth
Humble O. & R. Co. Waggoner 4-G	200	1901
Staley-Wynne et al Waggoner 11	145	2362

YOUNG COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Carey et al Gadberry 1	*	1002
Roamer Oil Co. et al McClatchey 1	*	1150
The Texas Co. Boren 4	120	1083
Tidal & Hoffer Oil Corp. Campbell 11	30	937
Campbell 15	*	907
Campbell 16	*	920
Campbell 17	10	941

BROWN COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Gillispie et al Gunn 1	¶3½	1200
McLester Oil Co. Clark 3	175	1211
Phillips Pet. Co. Williams 2	¶3	810

CALLAHAN COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
McCamey et al Blk 11, Townsite 1	60	1456
Nichols et al, Blk. 16, Townsite 1	*	1497
Riddle et al, Blk 26, Townsite 1	25	1440
Root Drlg. Co. Blk. 38, Townsite 1	10	1470
Shackelford et al Blk. 39, Townsite 1	15	1464
Stone et al Blk. 29, Townsite 2	30	1468
T. P. Coal & Oil Co. Comal County Fee 9	7	287
Williamson & Mason MK&T Fee 1	130	1436

EASTLAND COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Robert Oil Corp. J. J. Hand 1	15	1820
Root-Rhodes et al Gibson 5	7	1695
States Oil Corp. Johnson 1, dd	*	3615
Texas Dev. Co. Rushing 2	†	3316

STEPHENS COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Hughes et al Thompson 1	25	2072
T. P. Coal & Oil Co. Chas. Binney 60	35	1714
A. S. Veale 8	20	4050
The Texas Co. Grimes 2	35	3347

SHACKELFORD COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Hope Pet. Co. Reynolds 6	5	1289
Magnolia Pet. Co. Terry 1, dd	70	2215

COASTAL COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Spindle Top—		
Gulf Prod. Co. No. 216 Gladys, wo	15	875
Yount-Lee Oil Co. No. 3 McFadden	4500	2760
Batson—		
Kirby-Capitol Oil Co. Hodges 3, wo	40	3470
Paraffin Oil Co. Paraffin 63	2	400
East Batson Oil Co. Stateland 11	5	1015
Goose Creek—		
Humble Oil & Ref. Co.:		
No. 29 Gaillard Penn	75	2875
No. 30 Gaillard Penn	300	4300

AVERAGE DAILY PRODUCTION FOR U.S.

Texas

NORTH TEXAS

	Jan. 9	Jan. 16
Burkburnett	12,700	12,800
Electra	17,000	16,950
Iowa Park and K-M-A	5,500	5,500
Wilbarger	11,900	11,700
Panhandle	2,900	1,500
Petrolia	400	400
Archer County	30,300	30,200
Others	900	900
Total	81,600	79,950

EAST CENTRAL TEXAS

Mexia	14,050	13,950
Currie	1,100	1,100
Richland	2,500	2,550
Corsicana-Powell	33,650	33,200
Wortham	12,700	12,900
Totals	64,000	63,700

WEST CENTRAL TEXAS

Stephens County	13,100	13,050
Eastland County	6,200	6,200
Desdemona	2,050	2,050
Young County	9,200	9,250
Palo Pinto County	450	400
Callahan	4,950	4,950
Shackelford County	2,400	2,350
Reagan County	32,450	33,250
Others	5,000	5,000
Totals	75,800	76,500

SOUTHWEST TEXAS

Luling	21,400	20,500
Mirando	6,200	6,200
Somerset	2,200	2,200
Lytton Springs	8,150	8,100
Piedras Pintas	1,700	900
Others	650	600
Totals	40,300	38,500
Texas Outside Gulf Coast	261,700	258,650

GULF COAST

Goose Creek	8,450	8,650
Hull	14,200	15,250
Saratoga	900	1,300
Blue Ridge	800	800
Damon Mound	1,050	1,000
Batson	1,000	1,000
West Columbia	9,000	8,800
Humble	4,800	4,750
Pierce Junction	1,400	1,450
Sour Lake	3,800	3,750
Spindletop	1,150	2,800
Orange County	16,400	14,400
Edgerly	700	650
Evangeline	1,000	1,000
Vinton	6,700	6,700
Lockport	2,750	2,350
South Liberty	9,200	8,000
Big Creek	1,150	950
Boling	2,400	3,950
Others	1,250	1,200
Totals	88,100	88,750

Oklahoma

North Braman	2,300	2,200
South Braman	4,300	4,500
Blackwell	2,850	2,950
Hubbard	1,800	1,800
Thomas	14,750	14,550
Tonkawa	45,650	45,550
Garber	29,950	24,450
Burbank	44,600	44,500
Osage, outside Burbank	33,000	32,950
Watchorn	1,800	1,850
Cushing	22,650	22,700
Yale-Jennings	11,850	11,800
Davenport	20,350	21,450
Bristow-Slick	31,750	31,800
North Okmulgee	18,550	16,800
Lyons-Deaner	4,400	4,400
Stroud	2,950	2,850
Cromwell	20,250	20,550
Papoose	13,120	12,850
Wewoka	11,800	11,700
Duncan District	7,600	7,600
Graham	9,150	9,100
Fox	4,100	4,100
Healdton	15,050	15,050
Hewitt	13,250	13,200
Others	62,800	63,500
Totals	449,750	447,750

Kansas

Florence-Covert	1,900	1,900
Peabody Elbing	4,800	4,850
Eldorado-Towanda	14,150	14,200
Augusta-Fox Bush	5,100	5,100
Rainbow Bend	5,550	5,950
Russell	5,700	5,650
Others	62,750	62,750
Total	99,950	100,400

Louisiana

Homer	5,800	5,750
Haynesville	11,400	10,400
Caddo light	8,800	9,450
Caddo heavy	2,550	2,350
De Soto, Red River	3,800	3,850
Elm Grove	650	600
Bellevue	2,350	2,250
Cotton Valley	8,400	8,300
Others	450	550
Totals	44,200	43,500

California

	Jan. 9	Jan. 16
Santa Fe Springs	51,500	51,000
Long Beach	112,500	112,000
Huntington Beach	46,000	46,000
Torrance	32,000	31,000
Dominguez	23,500	23,500
Rosecrans	23,000	23,000
Inglewood	62,500	59,000
Midway-Sunset	93,000	92,000
Others	185,000	182,000
Total	629,000	619,500

Arkansas

El Dorado	7,800	7,450
Smackover light	19,400	19,200
Smackover heavy	153,700	154,300
Stephens	1,770	1,700
Nevada	1,550	1,600
Totals	184,150	184,250

Mountain States

WYOMING

Salt Creek	62,450	61,450
Grass Creek	2,700	2,750
Elk Basin	650	700
Big Muddy	3,250	3,350
Lost Soldier	4,050	4,600
Rock River	2,950	2,900
Teapot Dome	1,900	1,700
Others	4,500	4,500
Totals	82,450	81,950

MONTANA

Cat Creek	3,200	3,200
Sunburst	10,100	8,850
Totals	13,300	12,050

COLORADO

Moffats (Craig)	3,150	3,150
Fort Collins	1,900	1,950
Florence	400	400
Others	450	500
Totals	5,900	6,000

NEW MEXICO

Artesia	3,500	3,500
Hogback	500	500
Rattlesnake	300	300
Totals	4,300	4,300
Total Rocky Mountain	105,950	104,300

EASTERN

Including Ill., Ind., Ky., Pa., Ohio, W. Va., and N. Y.)	101,000	100,500

PRODUCTION SUMMARY

East of Rockies	1,228,850	1,223,800
United States	1,963,800	1,947,100

Company, Well and Location	Initial Production Bbls.	Depth
Sour Lake—		
M. E. Pevito Oil Co. Carpenter 11	13	720
Yount-Lee Oil Co. Gilbert 2	2500	4200
Hull—		
Gulf Prod. Co. Phoenix Dev. Co. 62	1200	2750
Phoenix Dev. Co. 61	1000	3450
Humble Oil & Ref. Co. Guedry 19	2200	3075
Orange—		
Brownie-Babbette Oil Co. McLean 9, wo	100	3415
Orange Pet. Co. Chesson 9, wo	1030	4650
High Island—		
The Sun Co. Cade 6, wo	35	3310

SOUTH LOUISIANA

Vinton—		
Edgerly Pet. Co. Vincent 8, wo	200	3200

Mountain States

WYOMING

Salt Creek—		
Wyoming Associated Oil Co.:		
No. 14, NE¼ 27-40-79	100	1273
No. 12, NW¼ 26-40-79	90	1110
No. 3-L, NW¼ 26-40-79	130	2511
No. 32, NW¼ 24-40-79	100	1175
No. 35, NE¼ 35-40-79	100	1172
No. 4-A, NW¼ 30-40-78	90	2065
Midwest Oil Co.:		
No. 36-L, NE¼ 27-40-79	150	2045
No. 35, SW¼ 35-40-79	100	1212
No. 6, NW¼ 2-39-79	110	1190
No. 18, NW¼ 25-40-79	600	1100
No. 17-A, SW¼ 26-40-79	120	1497
No. 35, SE¼ 27-40-79	90	1231
No. 34-A, SW¼ 19-40-78	80	2126
Wyoming Oil Fields Co.:		
No. 12, NW¼ 25-40-79	130	1210
No. 2, NW¼ 23-40-79	150	1246

MONTANA

Kevin-Sunburst—		
Wilson Interests' No. 2-B, SW¼ 25-35-2	70	1500
California Co. No. 4-S, NW¼ 27-35-2	110	1481
British Columbia-Montana Co. No. 5, SE¼ 25-35-2	45	1450
56 Pet. Co. No. 9-C, NW¼ 32-35-1	25	1483
Teton County—		
Northern Star Oil & Gas Co. No. 1, SE¼ 34-27-6	*	2650

NEW MEXICO

Eddy County—		
Flynn, Welch & Yates:		
No. 35, 29-18-28	80	2337
No. 37, 17-18-28	75	2150
Twin Lakes Oil Co.'s No. 6, SW¼ 28-18-28	70	2612

Louisiana

Caddo Parish—		
Austin Oil Co. Peak 22, 23-22-15	30	1029
Dixie Oil Co. Donovan 1, 21-22-15	15	1067
T. Schroeder et al Lane 1, 15-21-15	5	1695
The Texas Co. Caddo Mineral Lands 46, 23-21-15	20	1680
Total, 4 wells	70	

Company, Well and Location	Initial Production Bbls.	Depth
Cotton Valley Field—		
R. W. Norton et al Massey 1, 27-21-10	*	2615
Ohio Oil Co. Sandlin 3, 27-21-10	30	2538
Total, 2 wells	30	
Homer Field, Claiborne Parish—		
Gulf Ref. Co. West 18, 20-21-7	20	1500
Standard Oil Co. Lowenberg 33, 24-21-8	15	1340
Total, 2 wells	35	
Monroe Gas Field—		
Natural Gas & Fuel Corp. Scott 1, 8-20-4e, Union Parish	¶21	2156
Urania District, La Salle Parish—		
Ab Jones et al Russell 1, 24-10-1e	*	1598
Natural Gas & Fuel Corp.'s Urania 2, 24-10-1e	*	1602

Arkansas

Irma Field, Nevada County—		
Greeson et al Watters 2, 2-14-21	50	1205
Smackover Field, Ouachita County—		
Gulf Ref. Co. Bennett 8, 33-15-15	¶40	2685
Werner Saw Mill 44, 6-16-16	30	2260
Humble Oil & Ref. Co. Arnold B-8, 26-15-16	25	2030
Marine Oil Co. Snyder 11, 34-15-15	150	2365
Phillips Pet. Co. Laney A-10, 31-15-15	150	2555
Pure Oil Co. Brister 11, 28-15-15	115	2453
Roxana Pet. Co. Berg A-4, 28-15-15	*	1228
Standard Oil Co. Umstead B-5, 32-15-15	*	2390
Simms Oil Co. Laney 11, 31-15-15	¶30	2697
Smackover Field, Union County—		
E. M. Jones Murphy 5, 17-16-15	*	2661
Murdock et al Hays 7, 5-16-15	100	2365
Natural Gas & Fuel Co. Murphy B-5, 17-16-15	75	2692
Southern Crude Oil Purch. Co. Lyall 7, 3-16-15	250	2361
The Texas Co. Alphin 10, 3-16-15	10	2669
McClanahan 1, 12-16-16	200	2565
Thurman et al Houston 1, 12-16-16	*	2695
Total, 16 wells	¶70	1105

EAST TEXAS

Waskom Gas Field, Harrison County—		
Anderson et al Bush 1, R. W. Bedford H/R survey	¶30	1950
H. N. Crawford Harris 1, B. Stephens H/R survey	*	1011

Kansas

Butler County—		
Empire G. & F. Co. Hegburg 83, C NW 28-25-5	15	668
White Eagle Oil & Ref. Co. et al Wilhite 1, SWc NE SW 27-26-7	125	2138
Federal Oil Co., Bitler 4, C N L NW SW 29-26-8	100	2732
Hoyt et al, Bollner 7, SEc NE NE 19-27-6	15	2740
Flack, Davidson et al, Tobler 1, NEc SW SE 22-27-7, owd	58	2739
Empire G. & F. Co., Murray 29, NWc NE NE 30-25-5	*	2625
Federal Oil Co., Bitler 6, C W L W½ SW 29-26-8	*	2760
Cowley County—		
Trees Oil Co., Emery 2, SWc NW NE 28-31-4	*	3025
Roth & Faurot, Syckles 1, SWc SE SW 20-31-5	*	1728
Duffield et al, Boyd 1-A, NWc SW 19-32-5	500	3027
Gypsy Oil Co., Hunt 1, SWc SE SE SW 16-33-3	380	3228
Marland Oil Co., Hunt 2, SEc SW NW NE 21-33-3	22	3257
Elk County—		
Theta Oil Co., Webb 4, C W L SE SW SW 23-31-10	30	1338
Greenwood County—		
Theta Oil Co., Browning 15, SEc NW NE 17-22-10	100	2294
Titus et al, Prather 10, SWc SE SW NW 29-22-10	140	2432
Mid-Continent Pet. Corp. ,Shadel 7, C SW 15-23-13	*	1620
Leonard Pet. Co., Halverson 4, SEc SW 23-24-9	*	2200
LaRue et al, Schollenbeck 1, NWc SW 5-26-12	*	1715
Lyons County—		
Phillips Pet. Co., Swartz 1, SWc NE 33-21-12	*	2457
Russell County—		
Yon Johnson, Kollman 5, NWc NE NW 5-12-11	200	2825
Mid-West Ref. Co., Oswald 6, NWc 8-12-11	90	2898
Valerius O. & G. Co., Oswald-Valerius 11, NWc NE 8-12-11	200	2962
Ritchey & Moore, Dick 1, SWc NE 25-12-11	*	3475
Woodson County—		
Powell et al, Pengray 1, SEc NW 28-25-15	*	1530

Oklahoma

Carter County—		
Carter Oil Co., Kimbrell 1, C NW SW SW 22-2-3	75	2280
Coline Oil Co., Higgins 3, C SE SE SW 6-2-2	127	1723
Truman Oil Co., Ellis 7, C NW SW NW 30-2-2	50	2668
Schmerhorn et al, Watlins 3, C SE NW NE 8-3-2	175	3307
Humble Oil & Ref. Co., Hewitt-Walker 18, SEc NW NW SW 9-4-2	10	2125
Amerada Pet. Corp., Westheimer 11, NWc SE SE NW 28-5-1	125	1216
Magnolia Pet. Co., Rollins 1, C NE NE NW 1-3-2	*	3760
Humble Oil & Ref. Co., Black 1, C NW NE SE 22-4-1	*	3090
Commanche County—		
Cochran et al, School land 1-A, SEc NW 16-3-10	*	1104
Consolidated Oil Co., McVicar 1, NWc 27-1-10	*	2112
Creek County—		
Transcontinental Oil Co., Harjo 3, SEc NW SW 13-17-8	10	2279
Atlantic Oil Prod. Co., Johnson 5, C N L SW SE 14-17-8	30	2265
Sherman et al, Wanuke 2, C E L NE SE 19-17-10	15	2154
Pioneer Pet. Co., Bucktrot 5, NWc SW NE 24-17-10	30	1890
Atlantic Oil Prod. Co., Tahlodge 1, NWc NE SE 3-18-11	*	2504
Ira Anderson, Buckie 1, SEc NE SE 18-18-11	*	2648
Chronic et al, Billie 1-A, SWc 7-18-12	*	2317
Dixie Oil Co., Bowlegs 1, SEc 1-17-9	*	3095
Amerada Pet. Co., Jacinto 2, NWc SW NE 19-17-10	*	1044
Sherry et al, Ralston 1, NWc SE SE 1-16-10	*	2966
Garfield County—		
Carter Oil Co., Dively 55, NEc SE NW 24-22-4	307	4513
Sinclair O. & G. Co., Kisner 6, C NE NE SE 36-22-4	50	2231
Mitcher 5, SWc SE SW NE 36-22-4	35	2169
Kisner (West) 24, C SE NW NW 19-23-3	1380	....
Beople et al, Markel 1, NWc SW SW 20-22-3w	10	1700
Garvin County—		
Texas Co., Deryden 9, SWc NE 17-1-3	50	1737
Deryden 10, NEc SE NE 17-1-3	75	1685
Grady County—		
Little Neck Oil Co., McCaughtry 2, C NW NW 35-5-8	¶8	2500
Garvin Drlg. Co., Lindsey 1, SWc SE SE SW 35-5-8	75	1486
Hughes County—		
Braden & McClure, Smith 1, SWc NW NE 17-9-9	50	3050
Independent O. & G. Co., Chrisholm 1, SEc NW 24-8-10	¶2	2890
Jefferson County—		
Carter Oil Co., Jones 1, SEc NW NE 33-6-5	1800	1438
Humble-Hombro, Indian 4, NWc SW NW 34-6-5	12	1400
Kay County—		
Comar Oil Co., McCullough 3, NWc SW SE 5-28-1	137	2401
Orr 1, NWc SW NE 5-28-1	61	2406
Mid-Continent Pet. Corp., Townsite 1, Block 8, School lot, NEc SE NW NW 8-28-1	25	3522
Blackwell O. & G. Co., Jameson 1, SEc 5-27-1	80	3459
Texas Co., Burkholder 1, C SW NW 9-27-1	¶35	3437
Marland Oil Co., Fitzgerald 5, C NW SW NE 1-26-2	30	2984
Hubbard 4, C SE SE NW 12-26-2	235	2974
Wentz Oil Corp., Mahoney 8, C S L SE 28-25-1	1091	4280
Mid-Continent Pet. Corp., School land 1, SEc NE NE 36-27-1	*	2560
Carter Oil Co., Thomas 1, NWc NE 16-25-2	*	1835
Le Flore County—		
Le Flore County Gas & Elec. Co., Moore 1, SEc NW SE SW 8-9-25	*	3419
Lincoln County—		
Texas Co., Hopkins 2-B, SWc NW SE 2-14-5	600	3364
Prairie O. & G. Co., Stout 13, SEc NE NE 3-14-5	300	3465
Amerada Pet. Corp., Belless 3, C NE NW SW 3-14-5	525	3468
Belless 4, NWc SW 3-14-5	685	3465
W. M. Schriver, Kentzelton 1-A, NWc SW 7-14-4	*	3962
Mukogee County—		
J. M. Foltz, Taylor 1, C E L SE SW 28-15-7	¶1½	1410
W. N. Harsha, Lee 2, NEc SE NW 35-15-16	*	1778
J. L. Slusher, Manuel 1, C W L SW NW 6-14-7	*	....
McCurtain County—		
O'Shaughnessey & Haun, Haun 1, SEc NE SE 12-1-26	*	1760
Okfuskee County—		
Josey Oil Co., Stubblefield 1, SWc NE NW 33-12-11	400	3550
McMann Oil Co., Knight 1, SEc SW 36-11-9, owd	¶2	2969
Blakely Oil & Gas Co., Washington 2, SWc SE SE 10-11-11	*	....
Okmulgee County—		
Sheldon et al, Bruner 1-A, SEc NE SE 19-16-12	¶2	1841
Mickelson, Adams 7, NWc SE SW 20-15-12	¶1½	1080
Phillips Pet. Co., Brown 1, NEc SE 22-15-12	50	2160
Noble Oil & Gas Co., Arch 1, SWc NW 23-15-12	30	2155
Barbara Oil Co., Astron 2, NWc NE NW 35-15-12	¶22	1861
Halley Oil Co., Morton 2, SWc SE NE 32-13-12	¶6	2327
Magnolia Pet. Co., Wilson 3, NWc SE 4-12-12	30	2506
Moffitt et al, Holmes 3, SEc NW NE 7-11-12	10	2252
J. J. Callahan et al, Doyle 1-A, NEc SE SW 15-13-14	165	2450
Tidal Oil Co., Blackwell 7, NWc SE NW 1-11-13	40	2858
Selby, Flint 14, SEc NW NE 26-14-14	¶1	526
J. G. Lyons, Long 1, NWc NE 18-15-13	60	2614
Misner et al, Gooden 5, C S L SE SE 32-15-11	*	2990
Tribes Oil Co., Rentie 4, NWc SE SW 31-12-11, owd	*	3355
F. B. Nurta et al, Foreman 1, SWc NW SW 4-15-13	*	2643
Independent O. & G. Co., Wisner 2, C S L SW SE 25-14-13	*	....
J. K. Gardner, Foshee 4, NEc SW 4-13-14	*	2605
Osage County—		
J. A. Kennedy No. 1, NWc SW 14-29-10	15	1150
Duffield & Howard No. 1, SEc NE SW 28-28-11	25	1036
Owen Osage No. 358, C E L NW NE SW 8-27-11	¶8	720
Carter Oil Co., No. 15, SEc 16-26-6	75	2995
Moore et al No. 5, SWc NW NW SW SW 11-21-9	35	2126
Devonian Oil Co., No. 1, NWc NE		

Company, Well and Location	Initial Production Bbls.	Depth
NW NW 30-21-10	15	2118
Breene & Holm No. 1, SWc NW 28-20-10	20	2238
Lewis Oil Co., No. 1, NEc SE NE NE 18-29-6	*	2840
I. T. I. O. Co. No. 1, NWc SE 36-25-6	*	3227
Marland Oil Co., No. 4, NWc SE NW SW 15-24-8	*	475
Breene et al No. 15, NEc NW SW NW 23-21-10	*	2356
Pottawatomie County—		
Pierce Oil Corp., Madgett 1, NWc 25-10-4	*	460
Stephens County—		
Carter Oil Co., Garza 1, C N L NW SE 2-2-5	6	1597
Pauline Oil & Gas Co. and Clark & Cowden, Goza 4, SWc SE NE 2-2-5	90	1510
Carter & Knox, Simms-Garvin 5, SWc NE 2-2-5	15	1797
Big Twelve Oil Co., Talisferro 4, C W L SE SW 27-1-8	¶4½	1687
Crump & Beard, Bakes 4, NWc NE NE SW 32-1-8	75	1992
Amerada Pet. Corp., Blaydes 3, SWc NE NE 32-1-8, owd	60	2268
Commercial Pet. Co., Fobb 5-B, C SE NW SW 12-28	60	1531
Law-Kinsey, Hiser 1-A, NWc SW NW SW 21-1-8	*	2391
Magnolia Pet. Co., Bull 1, NWc 28-1-9, owd	*	2260
Tulsa County—		
Elliott et al, Strip 1, C E L NE SW 9-18-13	¶1	1575
Hutchinson O. & G. Co., Parkins 1-A, NWc SW NE 16-18-13	*	
Black, Sivalls & Bryson, Crosby 10, C W L SE NW 17-17-13	*	1895
Burke-Gibbs, Mason 5, SEc SW NE 16-16-14	*	1735
Wagoner County—		
Flint Ridge Oil Co., Abrams 1, C E L SE NE 29-18-7	¶1	501
Headley et al, Lucy 1, SEc NE 12-18-16	*	1202
E. Robetaille, McKellop 1, SEc NW SW 25-18-15	*	1575

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co. Bingham 501 tract 15	3	
Fee 1	2	
Riddle Estate 49	2	
Whipple 2	4	
Hodge 2	3	
Associated Producers Co. Bingham 568 tract 363	7	
Roy E. Diament Diament 11	3	
Hazlewood Oil Co. Bingham 111	4	
D. T. Andrus & Co. Bingham 15	4	
W. S. Jones & Son Bingham 1	4	
Petroleum Reclamation Co. Pratt 10	2	
Paul Evans & Co. Bingham 1	4	
Forest Oil Co. Baldwin 1	4	
Mrs. Joseph T. Jones Jones 1	4	
Simpson & Co. Gelpin 1	4	
William Hifler State Keller 1	4	
T. B. Wilson Borden 6	4	
A. E. Yahn Burns 9	4	
T. H. Kervin, Jr. Knopp 1	4	
W. C. Kervin Baldwin 1	4	
Venango County—		
C. G. Flinchbaugh Interests Flinchbaugh 3	2	
Hogan, Lester & Co. Jones 26	5	
S. Y. Ramage Hodges 43	2	
L. J. Boles & Co. Boles 33	2	
Porter, Hovis & Co. Edinger 4	2	
Jacob Sheasley Rice 3	2	
Butler County—		
Kreiff & Co. Rosenberry 1	¶1½	
McCullough Gas Co. McCullough 2	3	
South Penn Oil Co. Shaner 16	2	
P. Cradle & Co. Rowan 2	*	
Clarion County—		
Alum Rock Gas Co. Beichner 6	¶1¼	
Wentling, Cribbs & Co. Best 2	2	
Carroll, Fry & Co. Rowe 3	¶1	
Eisworth, Fefren & Co. H. Gatesman 1	¶1	
Center-Middle Field—		
D. Wade Irvine 2	2	
N. Knopf Knopf 1	2	
F. J. Moser Lot 3736 tract 28	2	
Greene County—		
H. E. Milliken & Co. H. & W. Cole 1	¶2	
City of Pittsburgh—		
Finley & Co. Finley 2	¶1	

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
Allegany County—		
Empire Gas & Fuel Co. Empire 2	3	
W. H. Lobaugh Trustee Perkins 1	3	
Martin Bros. & Wasson Wasson 1	3	
McDermitt & Gilligan McDermit 2	7	
M. J. Crowley & Co. Coast & Co. 1	3	
L. E. Norton & Co. Clark 1	2	
Wilbart Oil Co. McDermott 1	3	

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
Ritchie County—		
American Oil Dev. Co. Abraham Middleton 1	48	
South Penn Oil Co. Barbara Jamison 1	25	
Wetzel County—		
Carnegie Natural Gas Co. H. Springer 1	¶2	
Hope Natural Gas Co. J. A. Riter 2	3	
Manufacturers Light & Heat Co. E. E. Moore 1	4	
Clay County—		
South Penn Oil Co. O. D. Stockley 8	25	
Doddridge County—		
Nerr-Bell Oil & Gas Co. Mary Shrader 1	10	
Marshall County—		
Manufacturers Light & Heat Co. Wm. Meighan 1	10	
Harrison County—		
Reserve Natural Gas Co. D. M. Henrick 1	¶2	
Lincoln County—		
Union Oil & Gas Co. C. E. Porter 1	¶1	
Calhoun County—		
Martin Crowley I. M. McCoy 1	¶2	
Marion County—		
Owens Bottle Machine Co. William Clayton 1	¶2¼	
Tyler County—		
Morgan Bros. Clara Thorn 1	¶1	

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
Barren County—		
Ziegler Bros. Drennan 11	5	487
Fred Moore McCubbin 12	6	520
Lew J. Emery, Jr. Sons Co. Preston 7	*	375
Richardson 3	*	
M. B. Williams Lewis 1	*	
Norris & Harrington White-Smith 3	*	
Owensboro District—		
Smith & Pertel Howard 3	5	
White Plains Oil & Gas Co. John Ward 1	5	
Stevens & Co. J. V. Barlow 1	*	
Creek Drlling Co. David King 1	*	
Lawrence-Johnson Counties—		
Union Gas & Oil Co. Sanford Lyon 26	20	
William M. Stone Ira Lester 9	8	
Townsend & Garrison I. M. Hay 2	4	
Johnson-Magoffin Counties—		
J. H. Arnett J. H. Arnett 12	8	
R. G. Gillespie Mary Burke 5	7	
Bed Rock Pet. Co. W. E. Patrick 3	5	
Floyd County—		
Distill-Martin Co. Ike Osborne 1	¶2½	
Ohio Fuel Oil Co. M. Martin 2	*	1600
Warren County—		
Frank Cooksey Haden 1	*	1050
Cadet Oil & Gas Co. Biddle 24	*	1105
Wayne County—		
B. S. Huffaker Huffaker 3	*	
Bartram & Marsh John Rees 1	*	
Cumberland County—		
Wilcox Bros. Melton 2	50	
Estill County—		
Mountain Springs Oil Co. J. B. Rogers 10	2	
Allen County—		
Lee More Lee Moore 12	6	380

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Washington County—		
Peoples Banking & Trust Co. William Rader 43	2	
M. M. Stover A. J. McMahan 11	10	
Muskingum Gas Co. J. M. Proctor 1	¶2¼	
William Knock 2	¶1	
Anderson & Co. C. W. Greenlee 1	¶¼	
Dent & Co. Easter Goddard 2	¶¼	800
Schultz & Pollard William Honesty 2	¶½	
D. S. Boyle Marion Wetherall 6	¶¼	
Logan Gas Co. Anna Garrity 1	*	
Barrett & Pedrew T. B. Milligan 5	*	
Noble County—		
Herds Oil & Gas Co. Herman Williams 3	2	
Frank Nau & Co. Frank Nau 10	*	
Cain-Devoll Oil Co. L. H. Devoll 10	*	
Monroe County—		
A. Bodi Edward Cline 1	3	
N. T. Stoudt & Co. Dave Crawford 1	*	
Morgan County—		
The Pure Oil Co. E. A. Baringer 4	10	

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Lorain County—		
Ohio Fuel Gas Co. J. Wetzel 1	¶4½	
I. F. Ring 3	¶2	
Richard Putt 1	¶1½	
Edson Co. J. Schmidtz 1	*	
Hocking County—		
Ohio Fuel Gas Co. H. E. Huggins 1	40	
Emma Backus 1	*	
Sunday Creek Coal Co. Fee 133	*	
Knox County—		
Margget Oil Co. C. H. Davidson 2	5	
Ohio Fuel Supply Co. R. W. Mowery 7	¶2	
Upham Gas Co. G. W. Criss 1	*	2795
Athens County—		
Jay Oil & Gas Co. J. E. Bailey 7	¶¼	
Kemp & Co. J. N. Gaines 1	¶¼	
Logan Gas Co. F. Cole 1	¶1½	
Licking County—		
Midland Oil Co. Violet Bogle 1	45	
F. M. Rugg & Co. Clinton McKinney 2	4	
Wayne County—		
Klise-Eckstein-McCann Co. M. Fulton 2	25	
Glen Harmon Co. Clayton Harmon 1	¶4	
Ashland County—		
Hulse & Kundtz Dave Umbaugh 1	*	
Burton-Morgan & Stephens M. & J. Slate 1	*	
Medina County—		
Dillion & Frederick Bros. J. R. Mays 1	¶2	
Summitt County—		
Hulse & Kundtz Della McKee 1	¶¼	

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Hancock County—		
Ohio Oil Co. J. E. Huntington 14	3	1580
Auglaize County—		
Wallace & Abbott Alfred Gossard 1	3	1515
Lucas County—		
Doblinger Bros. & Co. Amelia Ward 2	2	1301
Paulding County—		
Bailey Oil Co. Burkhold 1	1¼	1399
Sandusky County—		
Charles F. Zeising Co. Herman Linke 1	*	1250

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
Gibson County—		
Murphy Oil Co. of Pa. Edward Dorson 1	*	1360

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
Lawrence County—		
The Ohio Oil Co. C. J. Borden Sr. 12	50	1475
International Oil & Gas Co. Alfred Vandenmark 1	*	
Marion County—		
Ohio Oil Co. F. M. Gunyon 8	2	1553
Crawford County—		
McNally & Starr Amelia E. Joseph 6	1	865

WILDCATS FROM ALL SECTIONS

Louisiana Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Bienville Parish—		
Hawks et al's Calhoun 1, 15-18-7 . .	*	1520

DRILLING REPORT

BOSSIER PARISH — Arkansas Fuel Oil Co.'s Murray 1, 14-23-14, sd 1130 ft. Benton Synd.'s Bulkley 1, 9-20-13, dk. Collins & Woodley's Kilburn 1, 18-19-13, lcn. Simms Oil Co.'s Sandidge 1, 9-18-11, set 10-inch 60 ft. Square Deal Oil Co.'s Hale 1, 17-18-11, to set 6-inch 1210 ft. G. W. Wetherbee's Bierle 3, 24-19-11, dry 530 ft.

CADDO PARISH — Ark-Caddo Oil Co.'s Nickerson 1, 30-19-15, to resume dr 2600 ft. Dixie Oil Co.'s Jolley 1, 27-22-15, dr 3735 ft; Noel B-2, 13-21-15, dr 2890 ft. Fortuna Oil Co.'s Levee Board 2, 8-20-15, set 4½-inch 4003 ft; Bradford 1, 24-21-15, rig. Ohio Oil Co.'s Ardis 1, 1-21-15, fsh 3684 ft; E. K. Smith 19, 12-21-15, dk.

CALDWELL PARISH — Alexander et al's Cruse 1, 6-11-4e, dk. Potts & Crickett's Gore 1, 30-12-3e, dr 1725 ft.

CATAHOULA PARISH — Ferguson-Kimbrough Oil Co.'s Nichools 1, 13-9-6e, sd 1980 ft. The Texas Co.'s Hyman 1, 24-8-2e, dr 285 ft.

CLAIBORNE PARISH—Evans et al's Boatner 1, 10-19-5, dr 1215 ft. Triangle Drilling Co.'s Keen 1, 7-19-5, to deepen 2764 ft; Meadows 1, 7-22-5, lcn.

DE SOTO PARISH—Dixie Oil Co.'s Jenkins 1, 9-12-11, set 8¼-inch 3293 ft. Fortuna Oil Co.'s Band 1, 32-12-15, bldg dk. Gulf Ref. Co.'s Williams C-18, 31-13-11, dr 5900 ft.

JACKSON PARISH—El Dorado Chief Oil Co.'s Rhymes 1, 13-14-4w, sdtr 3650 ft.

LA SALLE PARISH—P. J. White's Louisiana-Central 1, 27-10-2e, testing 1576 ft. Wright et al's Love 1, 16-11-2e, sd 1460 ft.

LINCOLN PARISH — Buckley & Palmer's Davis 1, 12-20-3w, dr 220 ft.

MOREHOUSE PARISH — Boisseau et al's Sullivan 1, 11-21-7e, coring 2415 ft.

NATCHITOCHES PARISH—Amerada Pet. Corp.'s Wafer 1, 3-11-8, gas blow-out 1521 ft.

OUACHITA PARISH—Culver et al's Cordell 1, 23-15-3e, sd 1360 ft. Dickson & Frue's Goodwin 1, 24-18-2e, sd 3036 ft. Southern Carbon Co.'s Jones 1, 6-16-5e, sd 3090 ft.

RAPIDES PARISH—Hincy & Mack's Barrow 1, 29-5-2e, sd 1250 ft.

SABINE PARISH—Emlet et al's Bowman-Hicks 6, 9-7-12, dr 3305 ft.

UNION PARISH—Arkansas Fuel Oil Co.'s Reeves 1, 14-20-1e, set 12½-inch 199 ft. Empire Gas & Fuel Co.'s Dubach Lumber 1, 17-20-1e, rig.

WEBSTER PARISH — Fortuna Oil Co.'s Bible 1, 8-20-9, dr 4050 ft. Humble O. & R. Co.'s Cox 1, 22-21-10, dr 3985 ft. Ohio Oil Co.'s Cox 1, 23-21-10, dr 3165 ft; Hodges 1, 23-21-10, dr 3760 ft. Palmer Corp.'s Davis 1, 23-21-10, to plug back to 4385 ft, and shoot and test. Victor Wenzel's Lunsford 1, 10-19-9, dr 1700 ft.

Arkansas Wildcats

Company, Well and Location	Initial Production Bbls.	Depth
COMPLETIONS		
Columbia County—		
Claude Chaddick's Emerson 1, 7-19-19 . .	*	2937
Ouachita County—		
Pure Oil Co.'s Stout Lumber Co. 1, 27-15-18 . .	*	2801

DRILLING REPORT

ASHLEY COUNTY—Pine Prairie Oil Co.'s Pine Prairie 2, 1-17-6, dk. Rhodes et al's Bledsoe 1, 20-15-7, dr 1580 ft, had show of gas at 1500 ft.

CALHOUN COUNTY — Brown-Murdock Synd.'s Freeman-Smith 1, 25-15-18, sd 2907 ft. Magnolia Pet. Co.'s Calion 1, 29-15-14, coring 3575 ft. Southern C. O. Purch. Co.'s Freeman-Smith 1, 19-14-15, rig.

CLARK COUNTY—Heath Trust's Arnold 1, 12-9-20, to deepen 838 ft. Wheelen Oil Co.'s Brown 1, 35-10-20, set 8-inch 820 ft.

CLEVELAND COUNTY — Dedman et al's Moore 1, 28-9-10, sd 1757 ft. Simms Oil Co.'s Moseley 1, 19-10-11, dr 3395 ft.

COLUMBIA COUNTY — Pluto Oil Co.'s Robinson 2, 23-18-23, set 8-inch 900 ft.

DALLAS COUNTY—McNiel et al's Owens 1, 29-10-16, dr 2100 ft.

DREW COUNTY—Graves et al's Karnes 1, 35-13-6, sd 3033 ft. McClintock et al's Ogle 1, 35-13-5, sd 1810 ft.

HEMPSTEAD COUNTY — Burton et al's Garland 1, 23-10-25, dr 8¼-inch plug 1000 ft. C. W. Robinson's Toner 1, 29-12-23, set 12½-inch 80 ft. Tarver et al's Swafford 1, 14-11-25, dr 2740 ft.

LAFAYETTE COUNTY — Arkansas Fuel Oil Co.'s Allen 2, 19-19-24, sd 2701 ft, repairing rig; Red River Lands 1, 18-19-24, dr into pay 2749 ft. Ken-saw Pet. Co.'s Red River Valley 2, 3-20-24, fsh 2820 ft. White et al's Roper 1, 27-16-23, dr 925 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-29, sw 2952 ft.

MILLER COUNTY — Buzzard Bluff Oil Co.'s Gillespie 1, 22-14-26, sd 655 ft. Copeland et al's Wiseman 1, 36-15-27, sd 2547 ft. Humble O. & R. Co.'s McKnight 1, 17-17-26, lcn.

NEVADA COUNTY — Magnolia Pet. Co.'s Johnson 1, 3-15-21, dr 4200 ft.

OUACHITA COUNTY — Buffalo Oil Co.'s Morgan 4, 22-15-19, lcn. Gosset et al's Davis 1, 26-15-19, dk timbers; Thompson 1, 22-15-19, dr 735 ft. Van Diver et al's Yarbrough 1, 22-14-17, dr 1525 ft.

UNION COUNTY—E. M. Jones' Dumas 1, 8-17-16, dr plug 2086 ft after having plugged back from 2520 ft. Kampeter et al's Townes 1, 34-19-11, set 12½-inch 203 ft. Liberty Oil Co.'s Davis 1, 31-16-14, coring 2165 ft. Owen et al's Porter 1, 4-17-16, dry 2131 ft to deepen. Ravenger et al's Dumas 1, 9-17-16, set 6¾-inch 2056 ft. J. D. Reynolds' Dumas 1, 15-17-16, dry, show oil, 2160 ft. Wingfield et al's Dumas 1, 9-17-16, rig sd.

Oklahoma Wildcats

ATOKA COUNTY—Hanson et al's Dabney 1, C SE NE 17-4-11, sd 3722 ft. Wapanucka Dev. Co.'s Underwood 1, C W L SE SE 28-15-10, sd 1343 ft.

BECKHAM COUNTY—Magnolia Pet. Co.'s Roberts 1, C NE SE 4-8-25, dr 3630 ft. W. R. Duke's McGee 1, NWc SW SE 25-8-22, sd 950 ft.

BLAINE COUNTY—Okama Oil Co.'s Eklemeir 1, SWc 21-15-10, sd 2610 ft.

CANADIAN COUNTY — Thos. Revelle's Dawson 1, NEc SE NW 34-13-9, sd 3065 ft. Carrol et al's Setter 1, SEc 2-13-8, sd 100 ft, tools away. O. D. Jones et al's Sanders 1, C NE NE NE 29-11-7, sd 2150 ft.

GRANT COUNTY—Cowden's Vallner 2, SW 22-25-4, sd 1475 ft. Lambert & Mink's Tabor 1, C SE NE SE 23-26-3, spd and sd. Dedman, Flannagan & Hennage's Sherrer 1, NEc SW 16-26-3, dr 425 ft. Marland Oil Co.'s Webb 1, C NW NE NE 2-27-3w, co, td 4109 ft. Ostot-Drilling Co.'s Snyder 1, NEc 6-28-3, rig.

HUGHES COUNTY — Walton, Snyder & Marshall's Kite 1, C E L NE NW 8-6-10, sd 3701 ft. Parmenter et al's Syewart 1, C SW SE 11-5-8, rig. Henry Greis & Kerrs' Pearson 1, C SE NE NE 30-5-10, sd 3500 ft. Brock's Bruner 1, C SW SW NW 28-7-8, dr 4220 ft.

JEFFERSON COUNTY — Makers et al's Major 1, C SE SW 34-5-6, spd and sd. Godley Oil Co.'s Woodworth 1, C NE NW 36-5-4, dr 2925 ft.

KAY COUUTY—Tonkawa Dev. Co.'s McDaniels 1, C SE SE SE 15-25-1, dr 815 ft. Souligny Bros.'s School land 1, NEc NW 16-26-3, fsh 1105 ft. Miss. Valley Oil Co.'s Butler 1, C NE NE 22-27-2, dr 3790 ft. Galconda Oil Co.'s Welge 1, SWc NW 29-27-2, dr 2625 ft. Davis Drilling Co.'s Street 1, C NE NE NE 31-28-3, dr 3466 ft.

LINCOLN COUNTY—Douglas Oil Corp.'s Ewing 1, NWc 7-13-3e, sd 3945 ft. P. & R. Corp.'s Henizig 1, NWc 7-13-6, td 3871 ft, std M. W. Schriver's Kentzelton 1-A, NWc SW 7-14-4, dry and abn 3962 ft. Ruby et al's Cull 1, NEc NW 36-15-4, sd 4721 ft.

LOGAN COUNTY — Blackford Oil & Gas Co.'s Lair 1, C S L N½ SE 28-16-1, sd 1675 ft. Franklin Oil Association's Moore 1, NWc SE SE 28-18-4, td 3570 ft. Haley & Pioneers' Quair 1, SWc SE 33-18-3, dr 1547 ft.

LOVE COUNTY—Smyer & Stein's Gray 1, C SE SE 19-9-1, rig.

MAJOR COUNTY—Frantz & Slick's Gray 1, C NW 36-21-11, sd 1000 ft. Texas Prod. Oil Co.'s Cheyenne Basin 1, SWc 6-22-14, sd 200 ft.

MARSHALL COUNTY — United "8" Marshall 1, SW SW 30-5-6, sd 510 ft.

PONTOTOC COUNTY—Bronson & Doyle's Starrett 1, SWc NE 5-4-5, sd 1400 ft.

POTTAWATOMIE COUNTY — Holmand Osmand et al's Fiddler 1, SEc NW 4-5-5, sd 545 ft. Texas Co.'s Allenbaugh 1, SEc SW 3-11-5, sd 4530 ft.

SEMINOLE COUNTY — Riverside & Kinney's Nitley 1, C S½ NE SE 25-5-5, ur 890 ft. R. F. Garland's Winey 1, C NW NE NW 6-6-8, spd. Bryan Bros.'s Walker 1, C SE SE SE 4-7-6, dr 2610 ft. Pure Oil Co.'s Jonah 1, C E L NW NW NE 15-9-7, dr 400 ft.

TILLMAN COUNTY—C. & O. Drilling Co. & Pearsons' Daugherty 1, SEc SE 33-4-15, dr 3210 ft. Oasis Oil Co.'s Snelling 1, SEc SE SE 13-1-18, dr 50 ft.

TEXAS COUNTY—Wilcox O. & G. Co.'s 1, C SW SW NE 28-3-13, 2000 ft; No. 1, SEc SW 21-4-14, bldg rig.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's Martin 1, NWc 14-34-11, dr 1500 ft.

BUTLER COUNTY—Skelly Oil Co.'s Dohren 1, NE 14-25-3, dr 2665 ft. Polhamus & Smith's Fuller 1, SEc 9-26-6, sd 770 ft. Marland's Lemon 1, SWc NW NE 9-28-7, dr 1550 ft.

BARTON COUNTY—Dick Gray's Taul 1, NWc 31-18-12, sd 2100 ft. John Herron's Everleigh 1, SEc NE 22-18-3w, dr 4550 ft. Huffins et al's Smith 1, C NE SE NE 17-19-11, sd 3900 ft.

CHASE COUNTY—Dingee, Pryor & Lockhart et al's Evans 1, NWc NE 1-22-9, sd 1300 ft; Ateyc 1, NWc SE 25-21-9, sd 1150 ft.

COWLEY COUNTY—S. H. E. Pet. Co.'s Day 1, NE NW 24-34-6, fsh 1400 ft.

CLOUD COUNTY—Concordie Oil & Prod. Co.'s Murdock 1, SEc 6-6-4w, sd 3030 ft.

CHAUTAUQUA COUNTY—Blackwell O. & G. Co.'s McKown 1, NWc SE 31-32-10, sd 2290 ft, sd.

ELK COUNTY—I. T. I. O. Co.'s Cummings 1, C NW NW 31-30-10, sd 1530 ft.

Can set this plug 40 feet off bottom

Plugs are Packed With Oakum at Factory

—with 3-inch anchor—saves filling in or building bridge

The GUIBERSON Bottom Water Plug can be set any distance off bottom desired. A 3-inch anchor pipe serves up to 40 feet. To set higher a heavier pipe should be used. Half flange is screwed on bottom of anchor pipe to serve as a shoe.

For setting flush on bottom of well, the collapsible core type shown at right, is used.

This plug is superior to all others in two respects:

1. It takes a screw-like grip in the walls, and is absolutely "unbudgeable", upward or downward, once it is properly set.

2. The packing medium, oakum, is both low in cost and IDEAL for this purpose. It is absolutely non-porous, when compressed, giving a perfect seal against water and gas,—and its durability insures a PERMANENT seal.

This plug has a reputation for handling jobs after all other types have failed to effect a shut-off. Fully patented.

Collapsible Core Type for Setting Flush on Bottom

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318 First Nat'l Bank Bldg., HOUSTON

506 Trust Bldg., NEWARK, O.

GUIBERSON

BETTER BE SAFE THAN SORRY

Say you saw it in The OIL WEEKLY

GREENWOOD COUNTY—T. K. Simmons' Frankhauser 1, NE SW 4-22-12, sd 645 ft.

GERRY COUNTY — Liberty-Texas' Wright 1, NEc 9-12-6, sd 1100 ft; Foster 1, NEc 30-13-6, sd 2000 ft.

GRAHAM COUNTY—Keyes Bros.' Taxton 1, SEc NW 23-8-24, 8-inch 2420 ft. Gruien & Shilers' Baker 1, NWc SE NW 17-10-24, rig.

LABETTE COUNTY—Ark. Fuel Oil Co.'s Sparks 1, NEc SE SW 14-31-7, sd 1100 ft.

LINCOLN COUNTY — Scott & Collins' Stone 1, SE SW NE 19-11-6, sd 500 ft.

OSAGE COUNTY—Rogers & Biddle's Bertha 1, SEc NW SE 22-17-15, lcn. Mul-Vit Dev. Co.'s Neil 1, NWc NE SW NW 8-17-17, sd 2835 ft. Baker et al's Lease 1, C SE SE 3-15-15, sd 260 ft.

RENO COUNTY — Frank Hopper's Stevens 1, NWc 7-26-7, sd 2750 ft.

RICE COUNTY—Stamey's Barnes 1, SEc NE 21-20-6, sd 2726 hfw. Jasper & Beschka's Walker 1, SWc NE 10-18-6, ur 5-inch 3460 ft.

RILEY COUNTY—Pawnee O. & G. Co.'s Marks 1, SWc NE NW 26-10-6, dr 2400 ft.

ROOKS COUNTY—Keys Pet. Co.'s Saidon 1, NWc SW SE 7-8-20, spd and sd. C. Findeiss et al's Mix 1, SWc 25-10-19, td 3669 ft.

SALINE COUNTY—Thrall et al's Halquest 1, SEc NE NW 15-15-4, sd 1010 ft.

SUMNER COUNTY — Roxana Pet. Corp.'s Miller 1, NE SW 17-32-2e, sd 2425 ft. John Herron et al's Baker 1, NE SW 13-25-2w, cellar.

TREGO COUNTY—Keys Pet. Co.'s Welsch 1, NWc SE 5-11-25, sd 1450 ft; Welsch 2, SWc NE SW 5-11-25, sd 1550 ft.

WABAUNSEE COUNTY—Williams et al's Henderson 1, NEc SW NE 15-13-12, sd 3600 ft.

WOODSON COUNTY—Alter et al's Hunt 1, NWc SW 13-25-14, sd 700 ft.

Central West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Reagan County—		
Texon Oil & Land Co. University 31	75	3065
University Oil Co. University 1....	*	3205

DRILLING REPORT

COKE COUNTY — Lipan Oil Co.'s E. C. Rawlings 1, dk.

CONCHO COUNTY—Dutton et al's W. O. Schlutz 1, dk in C SE¼ sec 127, T&NO sur, blk 72.

CRANE COUNTY—Cordona Oil & Potash Co.'s Jax Cowden 1, sd 3571 ft. J. S. Cosden et al's Connell 1, lcn. Church-Fields et al's University 1, spd and sd. Independent O. & G. Co.'s Len Taylor 1, spd and sd. Marland Oil Co.'s Cowden 1, lcn. Penn-Texas Dev. Co.'s Jax Cowden 1, dr 2185 ft. Texas Development Co.'s Jax Cowden 1, dr 3630 ft. F. P. Zoch et al's S. Keith 1, sec 100, lcn.

CROCKETT COUNTY—J. S. Cosden et al's Noelke 1, dr 855 ft. J. C. Cooke (Wilcox) et al's University 1, co 3242 ft; J. S. Todd 1, sd for cas 1350 ft. Crockett Drilling Synd.'s J. M. Shannon 2, sd 1590 ft; Shannon 3, lcn. Cumberland O. & G. Co. et al's Couch 1, spd and sd. Humphreys Corp.'s University 1, sd for cas 2055 ft. Humble O. & R. J. P. Sorg 1, elevation 2757 ft, top salt 1130 ft, dr 2325 ft. Magnolia Pet. Co.'s J. M. Shannon 1, dr 660 ft. Republic & Marshall's J. S. Todd 1, dr lime 2140 ft. Wm. Schaffer et al's University 1, sd 1365 ft. Carl Cromwell et al's L. P. Powell 1, elevation 2799 ft, top salt 1135 ft, dr 2385 ft. Humble & Marland Oil Co.'s Powell 3, elevation 2812 ft, top salt 1170 ft, top lime 2585 ft, sd to account gas with 2400 ft oil in hole, td in brown sandy lime 2723 ft.

CULBERSON COUNTY — The California Co.'s M. A. Grisham 1-A, sd 4010 ft. Pure Oil Co.'s Mrs. G. H. Quaid 1, sd 1900 ft. Deep Rock Oil Co.'s Kloh-Rumsey 1, lcn at C SE¼ sec 21, TP Ry sur, blk 59, tsp 7. M. A. Grisham et al's Grisham 1, sd 3370 ft.

JEFF DAVIS COUNTY—Herbert Oil Co.'s T. M. Wingo 1, sd 1782 ft.

GARZA COUNTY—Deep Rock Oil Co.'s S. M. Swenson 1, spd and sd. Emerald Oil Co.'s Connell 1, dr 1955 ft. Mid-West Exploration Co.'s N. N. Rogers 1, lcn in sec 93, H&GN Ry sur, blk 5. Choate-Henshaw & Marshall's Connell 1, trying to lower cas with hfw 3320 ft.

GLASSCOCK COUNTY — Case-Hoover et al's W. H. Sparkman 1, sd 1945 ft. J. A. Mascho & Marland's Nellie Calder 1, spd and sd. Choate-Henshaw & Marland's Neal-Monk 1, dr 2095 ft.

TOM GREEN COUNTY—M. D. Bryant et al's Llano County Fee 1, dr 350 ft. Penn-Winsor et al's Harley Turner 1, sd for cas 1127 ft. Church-Fields et al's Williams 1, dr 810 ft. Roxana Pet. Corp.'s L. T. Clark 1, sd for shot in oil pay 1340-60 ft.

HOWARD COUNTY—Deep Rock Oil Co.'s Hyman-Scott 1, co after fire, td 3005 ft. Fred Hyer et al's H. R. Clay 1, pumping 10 bbls oil, td 1565 ft. Choate-Henshaw & Marland Oil Co.'s O'Daniel 1, fsh bailer, td 3103 ft. Owens-Sloan et al's Scott-Chalk 1, machine. Transcontinental Oil Co.'s John Roberts 1, dk. H. G. Gwinnupp et al's Talley 1, lcn at C SW¼ sec 35, blk 32, tsp 1-S.

IRION COUNTY—Oklavania Oil Co.'s Sawyer Cattle Co. 1, top salt 750 ft, dr 1025 ft. Orient Oil Co.'s J. D. Sugg 2, spd and sd. P. H. Williams et al's Ash Bros. 1, dk located center sec 20, Washington County RR. sur.

JONES COUNTY — Red Bank Oil Co.'s Alexander 1, sd 2340 ft. J. C. Yancy et al's Herndon 1, spd and sd; Rowell 1, spd and sd.

KENT COUNTY—The Texas Co.'s Barron 1, dr 420 ft.

KING COUNTY—The California Co.'s R. B. Masterson 1, sd 3100 ft. Hoffer Oil Corp.'s Patten 1, sd 1580 ft.

LOVING COUNTY—Lockhart & Co.'s W. D. Johnson 1, showing oil and water 3165-76 ft, sd for 8¼-inch cas 3218 ft.

LYNN COUNTY—Hart Oil Corp.'s C. O. Edwards 1, dr 175 ft.

MIDLAND COUNTY — M. Agress et al's Jones 1, sd 755 ft. Rook-Zimmerman et al's Hill 1, sd 3650 ft.

MITCHELL COUNTY—Atlantic Oil Prod. Co.'s Adams 2, swabbing 150 bbls 3075 ft; Adams 3, dr 1125 ft; Adams 4, rig. The California Co.'s Adams 1-B, set cas 2754 ft; Paul Elder 5, rig; Morrison 15, dr 1800 ft; H. C. Miller 5-A, spudding; Swenson 1, set cas 2727 ft; Womack 3, dr 1210 ft. Eastland Oil Co. et al's Adams 1, dr 500 ft. W. B. Green et al's Ellwood 1, sd 3305 ft. Mid-Kansas O. & G. Co.'s Ellwood 1, dr 410 ft. Marland Oil Co.'s Shumaker 1, dr 200 ft. Morrison-Thompson's Scott-Hyman 1, sd 1440 ft. Magnolia Pet. Co.'s W. W. Watson 1, dr with oil in hole 3005 ft; A. P. Watson 1, E offset to W. W. Watson 1, lcn; Lucey Coleman 1, dr 2740 ft; F. Adams 1, spudding; C. M. Adams 3, rig; Kloh-Abrams 1, rig.

PECOS COUNTY—Tom Adams Oil Co.'s A. A. Gray 1, dr 1100 ft. Dixie Oil Co.'s Mrs. L. Hersheusen 1, ur cas 1500 ft. Transcontinental Oil Co.'s Perry 1, ur cas 1880 ft. T. J. Quinby et al's E. M. Metcalf 1, sd 790 ft. West Texas Exploration Co.'s Macey 1, sd 1160 ft.

PRESIDIO COUNTY—Hadlock & Miller's Tootle 1, sd 1780 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 20-A, water trouble 2455 ft; Uni-2480 ft; University 37-A, rig; University 51, versity 23-A, flowing by heads, dr out bridge 2461-69 ft; University 25-A, water trouble, dr by tools 2485 ft; University 52, fsh tools 2510 ft; University 53, dr 2880 ft; University 54, rebldg. burned rig, flowing 2300 bbls oil, td 3070 ft; University 55, dr 2825 ft; University 56, rig; University 57, dr 1840 ft; University 58, fsh cas 1060 ft; University 59, dr 1650 ft; University 60, dr 565 ft; University 61, dr 453 ft; University 62, dr 350 ft. H. D. Camp et al's University 1, sd 280 ft. Milham Corp.'s University 1, dr 1060 ft. Ben Simon et al's R. A. Walters 1, lcn. Peer Oil Corp.'s Sawyer Cattle Fee 1, dr 800 ft. Texon Oil & Land Co.'s University 33, dr 2675 ft; University 37, dr 2710 ft; University 38, rig; University 1-A, deep test, co 1875 ft.

REEVES COUNTY—Deep Rock Oil Co.'s M. W. Tatum 1, sd for repairs with trace oil 2290-2308 ft. Humble O. & R. Co.'s Kloh-Rumsey 1, steel dk in NE corner sec 33, TP Ry sur, blk 57, Tsp 1. World Oil Co.'s Abrams 1, dr 1485 ft. Schooler-Slack et al's Abrams 1, sd 320 ft.

SCURRY COUNTY—Fogelson et al's Bryce 1, spd and sd. Lockhart & Co.'s S. H. Newman 1, dr 410 ft. Morrison-Thompson's M. E. Towle 1, rig.

STONEWALL COUNTY — Arkansas Fuel Oil Co.'s Craft 1, sd repair engine 3134 ft. Elder Nance et al's Ward 1, sd 2130 ft; Thomas 1, sd 1520 ft. Ward Synd.'s J. Q. Ward 1, sd 1960 ft.

STERLING COUNTY — Co-Operative Dev. Co.'s E. W. Douthitt 1-A, dr 1230 ft. Chicago-Texas O. & G. Co.'s Durham 1, dr 2405 ft. Chas. Harty et al's Reynolds-Harty 1, dr 1615 ft. Deep Rock Oil Co.'s Clark 1, spd and sd. H. D. Rummell & Kanawah-Angelo Oil Co.'s L. T. Clark 1, sd 1430 ft. G. M. Richardson et al's J. S. Johnson 1, lcn at C NW¼ sec 70, SP RR. sur, blk 17. Wrightsman et al's Collins 1, dr 620 ft.

SUTTON COUNTY — Chesapeak Oil Co.'s Clarkson-Ellison 1, dr 480 ft.

TAYLOR COUNTY—Sanger O. & R. Co.'s R. H. Anderson 1, sd 1860 ft; W. Norwood 1, spd and sd.

UPTON COUNTY—Big Mesa Oil Co.'s University 1, dr anhydrite 2700 ft. Choate-Henshaw & Marland's Noelke-Murphy 1, lcn. Dixie Oil Co.'s A. S. Burleson 1, rig. W. W. Donnelly & E. L. Hults' H. M. Halff 1, spudding. J. A. Germany et al's H. M. Halff 1, dr 860 ft. Independent O. & G. Co.'s A. S. Burleson 1, elevation 2616 ft; top salt 575 ft, dr 950 ft. Kirby Pet. Co.'s Union Land Co. 1, elevation 2529 ft, ur 6⅝-inch cas 2580 ft. Plateau Oil Co.'s Union Land Co. 1, elevation 2533 ft; top salt 555 ft, dr 1715 ft. Republic Prod. Co. & Marland Oil Co.'s Mrs. Baker 1, pumping 80 bbls oil and 25 bbls water, td 2271 ft. The Texas Co.'s Union Land Co. 1, dr 400 ft. F. P. Zoch et al's Land Co. 1, dr red rock 430 ft; E. P. Ruhman-Windham 1, rig.

WARD COUNTY—Chespeak Oil Co.'s Edgar J. Marston 1, rig. Gulf Prod. Co.'s Hutchings et al 1, elevation 2609 ft; top salt 825 ft; top lime 2105 ft; top big lime 3025 ft; dr gray lime 3240 ft.

WINKLER COUNTY—R. A. Westbook & Co.'s T. G. Hendrick 1, rig.

Texas Panhandle Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Gray County—		
Young & Patrick et al Allie Byrum 1	15	3278
Hutchinson County—		
Dixon Creek Oil Co. Smith 2-A	300	2865

DRILLING REPORT

CARSON COUNTY—Amarillo Oil Co.'s L. Bivens 3-B, dr 2695 ft. American Ref. Co.'s Burnett 5-A, set 6⅝-inch cas 2989 ft; Burnett 6, dr 2075 ft. J. S. Cosden et al's Burnett 1, dr 1725 ft. B. S. Barnes et al's Burnett 1, dr 400 ft. Crosbie et al's Burnett 3, dk. Culbertson Bros. & Co.'s Burnett 1, sd making gas 2460 ft. Gates Oil Co.'s Burnett 2, crooked hole 2850 ft. Gulf Prod. Co.'s Burnett 10, dr 140 ft. Magnolia Pet. Co.'s Burnett 2, lcn is 660 ft west of No. 1. Marland Oil Co.'s Burnett 1-A, rig; Burnett 1-B, lcn. The Texas Co.'s Burnett 4, dr 2050 ft.

COLLINGSWORTH COUNTY—Continental Oil Co.'s Hughes 1, dr 2910 ft.

COTTLE COUNTY—National Potash Co.'s A. C. Dulaney 1, dr 1425 ft.

GRAY COUNTY — Anderson-Brock et al's Beavers 1, dr granite 3725 ft. Empire Gas & Fuel Co.'s H. Heithott 1, making three million gas 3065-70 ft, setting 8¼-inch cas 3075 ft. H. F. Wilcox et al's Worley-Reynolds 2, dr 1475 ft. The Texas Co.'s G. H. Saunders 2, rig.

HALL COUNTY—Hudspeth & Taylor's T. R. Fuston 1, dr 1645 ft.

HUTCHINSON COUNTY — American Ref. Co.'s Weatherly 1, probably junked hole, td 3325 ft. Canyon Oil Co.'s Whittenburg 1, swedging cas 2300 ft; Whittenburg 2, dr 720 ft. Centerfield Oil Co.'s Smith 1, making gas 1575 ft, sd repairs 2885 ft. Jack Crosbie et

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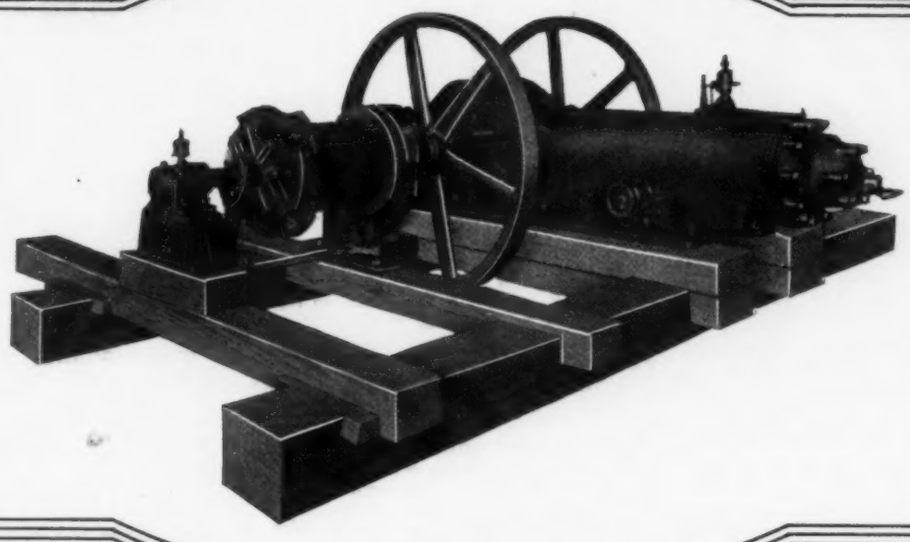

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Say you saw it in The OIL WEEKLY

al's J. A. Whittenburg 1, spd and sd for water. Currie Bros. & J. R. Phillips' Smith 1, ur 12½-inch cas 600 ft. Drysdale Oil Corp.'s Weatherly 1, dr 1990 ft. Gates Oil Co.'s Kingsland 1, rig. Gibson Oil Corp.'s G. A. Whittenburg 2, rig; J. A. Whittenburg 1, dr 1350 ft; Kingsland 1, rig. Gulf Prod. Co.'s E. Cockrell 1, dr 720 ft; J. A. Whittenburg 1, dr 1810 ft. W. H. Holmes et al's Smith 1, spudding. Lennox & Stover's Smith 1, dr 1365 ft. McKinney-Bayer Oil Corp.'s Weatherly 1, dr 2570 ft. McIlroy Oil Co.'s Smith 2, dr 2625 ft. McIlroy & Herring's Smith 1, dr 2150 ft. McMillen et al's J. A. Whittenburg 1, spd and sd for water. Miller & Wetzel's J. A. Whittenburg 1, spd. J. H. Middleton et al's Weatherly 2, dr 2875 ft. Native Oil Co.'s Johnson Bros. 1, dr 2575 ft. J. R. Phillips et al's Weatherly 1, swedging cas 2190 ft. Phillips Petroleum Co.'s J. A. Whittenburg 1 and 2, rigs. Phillips Pet. Co. et al's Johnson Bros. 1, dr 460 ft. Prairie O. & G. Co.'s M. Weatherly 2, fsh 900 ft. Prairie & TP Coal Co.'s Johnson Bros. 1, dr 2065 ft. Pulaski Oil Co.'s Smith 1, dr 760 ft; Smith 2, dr 410 ft; Smith 3, rig. W. R. Ramsey et al's Johnson Bros. 1, rig. Skelly Oil Co.'s J. A. Whittenburg 1, rig. South Hutchinson Oil Co.'s Whittenburg 2, dr 2275 ft; Whittenburg 3, rig. The Texas Co.'s E. Cooper 1, rig; Burnett 7, dk. Travelers Oil Co.'s Kingsland 1, trace oil 2830 ft, dr 2850 ft. Tex-O Oil Johnson Bros. 1, dr by bit 2740 ft. Twin-Six Oil Co.'s Kingsland 2, dr by tools 2435 ft; Kingsland 3, rig; Kingsland 4, dr 520 ft. J. D. Ward et al's Cockrell 1, and 2, rigs. Western Enterprise O. & G. Co.'s Smith 2, will set 8¼-inch cas 2083 ft. Westex Oil Co.'s Whittenburg 1, dr 2130 ft; J. A. Whittenburg 2, dr 260 ft. Jim Whittington et al's Kingsland 1, dr 2545 ft. White Eagle O. & R. Co.'s Smith 1, dk.

MOORE COUNTY—Amarillo Oil Co.'s R. B. Masterson 2-A, pull cas 1887 ft.

POTTER COUNTY—Amarillo Oil Co.'s Lee Bivins 4-A, co after shot 2725 ft. Prairie O. & G. Co.'s L. Bivins 1, co after shot 2650 ft.

ROBERTS COUNTY — Phil Engle et al's Mrs. Lederrick 1, sd 3950 ft.

SWISHER COUNTY—Overson & Keagans et al's L. M. Woodward 1, spudding.

WHEELER COUNTY — McFarland & Thomas et al's Kachelhoffer 1, trace gas 1853 ft, dr 1860 ft. Mid-West Exploration Co.'s W. C. Company 1, fsh cas 2985 ft.

Coastal Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Ft. Bend County—		
Gulf Prod. Co.'s Moore 5	.2000	3708
Harris County—		
The Texas Co.'s Mack Miller 4	*	4000
Galveston County—		
Gulf Prod. Co.'s Smith 3	*	3350
Jefferson County—		
Yount-Lee Oil Co.'s McFaddin 3	..5000	2780
Orange County—		
Sinclair Oil & Gas Co.'s Turner 1	*	5535

DRILLING REPORT

CHAMBERS COUNTY — W. C. Moore et al's Blanke 2, on Blanke tract, H&TC sec 39, 1500 ft W of Blanke 1, dr 850 ft gumbo. C. T. Rucker's Fisher 1, 6 miles SE of Goose Creek, at Houston Point, sd; Rucker 2, 6000 ft NE of Fisher 1, on A. B. Lawrence tract, sd.

COLORADO COUNTY — R. C. Timms et al's Drumgould 1, H. A. Cutler lease near Eagle Lake, dr 1550 ft.

FORT BEND COUNTY—Gulf Prod. Co.'s Moore 5, John Moore lease, near Orchard dome, L. Bruknap sur, 1000 ft SE of Moore 4, flowing 2000 bbls 3708 ft. Rycade Oil Corp.'s Wisdom 4, 200 ft S of No. 2, off Nash dome, dr 1507 ft hard sand; Flessner 2, 150 ft N and 1300 ft E of SW cor Dredrich Flessner 200-acre tract, moving in rig; J. Meier 3, off Nash dome, dr 20 ft. P. A. Neilan, Inc.'s Frederick 2, 300 ft to N and E lines, sur 19, S. George lease, no report.

GALVESTON COUNTY—Gulf Prod. Co.'s George E. Smith 3, at High Island, 300 ft E of Smith 2, abn 3350 ft; George E. Smith 4, 300 ft W of Smith 2, on Dunman sur, wt for cement to set 3200 ft.

HARDIN COUNTY—Vacuum Oil Co.'s R. Teel 3, near Saratoga, 1000 ft S and 1000 ft W of No. 2 on R. Teel 155-acre tract, bldg dk.

HARRIS COUNTY—The Texas Co.'s Warren 6, near Hockley, 1300 ft to W and 800 ft S of E line, E. Ehrenberg sur, dr 2100 ft hard shale. Mackmiller 4, 200 ft N and W of SE cor of James Erwin sur, abn 4000 ft. Drain Oil Co.'s J. T. Harrell 1, at Cross Timbers, 1¼ miles SW of Sid Westheimer, 6 miles NE of Houston, lcn. Rio Bravo Oil Co.'s Settegast 2, 650 ft W and 500 ft S of NE cor of Settegast 100-acre lease, dr 3818 ft gumbo; Pierce Fee 2, 300 ft N and 75 ft E of No. 1, lcn.

HUNT COUNTY—Rycade Oil Corp.'s Holden 1, 1339 ft N and 1150 ft to E line on M. A. Holden-J. McAdams tract, spd.

JEFFERSON COUNTY—Houston Oil Co.'s Sun Davis 4, at Big Hill, 400 ft N of No. 3, T&NO Ry sur, dr 3170 ft hard sandy shale; Pipkin Davis 1, near Big Hill, 250 N and E of SW cor of Pipkin Davis 32-acre tract, sd; Sun Dyson 1, near Big Hill, 433 ft to E and 250 ft to S line of J. L. Dyson sur, dr 2801 ft lime rock. Gulf Prod. Co.'s Thomas 5, at Fannette, near Hampshire on E. Thomas 445-acre tract, dr 1320 ft; Thomas 6, rigging up. Yount-Lee Oil Co.'s McFaddin 3, 300 ft S of No. 2, flowing 600 bbls 2780 ft.

MATAGORDA COUNTY — Sheppard Oil Co.'s Hawkins 2, at Sheppard Mound, on Hawkins Ranch, dr 2925 ft hard rock.

ORANGE COUNTY — Sinclair Oil & Gas Co.'s Turner 1, 1211 ft S of NE cor J. W. Turner 30-acre tract, abn 5535 ft. Republic Prod. Co.'s David French 1, 1628 ft W and 1058 ft to S line, M. Palmer tract, no report.

REFUGIO COUNTY — Houston Oil Co.'s O'Connor 1, Tom O'Connor lease, Hearn sur, near Mission Bay, no report.

VICTORIA COUNTY — Houston Oil Co.'s O'Connor 1, Mrs. M. V. O'Connor Ranch, dr 1920 ft gumbo.

WASHINGTON COUNTY—S. H. Spangler et al's Regeine 1, 6 miles NW of Burton and 3½ miles N of Carmine, Sandtown district, on Regeine farm, dr 865 ft gumbo.

WHARTON COUNTY — Jas. W. Rich & Humphrey Oil Corp.'s Dennis 1, 5 miles NW of Wharton on blk 9, R. Kuykendall league, 800 ft of lot 10, 2324 ft W of E line of blk 8, 3125 ft S of Colorado River, dr 435 ft gumbo. Atlantic Oil Producing Co.'s Taylor 1, 300 ft NW of Texas Co.'s Taylor 3 and 50 ft from SW and SE lines of Atlantic 20-acre tract, SW side of Boling dome, dr 3150 ft; Taylor 3, 200 ft W of No. 1, dr 400 ft; Taylor 3, 50 ft from both lines of SW cor of Atlantic 20-acre lease, dk. Gulf Prod. Co.'s Chase 1, 500 ft to S and 50 ft to W lines of E. M. Chase 60-acre tract, Stephen F. Austin league, near Boling, rigging up; Borden 1, on A. P. Borden 600-acres near Mackey, dr 150 ft. Humble O. & R. Co.'s Hawes 1, 50 ft from both lines of NE cor of E. Hawes 74-acre tract, dk. The Texas Co.'s Taylor 4, 200 ft NW of Taylor 3, on S. T. Taylor 400-acre tract, rigging up; M. S. Floyd 1, on M. S. Floyd 56-acre tract, lcn.

LOUISIANA GULF COAST—Vacuum Oil Co.'s Farquhar 2, 150 ft S and 100 ft E of NW cor of SW¼ of SW¼ of sec 9, cementing 3692 ft; Miller 5, 300 ft N of SW cor of NW¼ of sec 10, fsh 4416 ft; Freiberg & Wolfe 1, 780 ft S and 685 ft E of NE cor of SW¼ of sec 9, washing 4654 ft; Miller 6, 475 ft N and 11 ft W of center of sec 9, twp 9s, range 10w, dr 1837 ft hard sand; Bordages 2, 500 ft W and 200 ft N of SE cor of N½ of NW¼ of sec 9, dr 368 ft. Marland Oil Co.'s Phoenix Development Co. 1, at Lockport, 650 ft E and 150 ft S of NW cor of SW sec 16, mixing mud 5664 ft. Ohio Oil Co.'s Martin 1, in Martin Parish, Hager dome district, NE¼ sec 32, 1000 ft S and 10 ft W of NE cor, dr 1304 ft gumbo. Standard Oil Co.'s Industrial Lumber Co. 5, Calcasieu Parish, 1000 ft S of No. 4, rigging up. Union Sulphur Co.'s Doiron 1, Calcasieu Parish, 340 ft S and 870 ft W of NE cor of NE¼ sec 4-8-10, lcn. George Leland's Caffrey 1, St. Mary Parish, 330 ft N and 220 ft E of SW cor lot 101 on Cote Blanche Island, sec 12-15-7, fsh 1620 ft. Earl Pool et al's Castle 1, Calcasieu Parish, NE¼ of sec 14-9-3, sd 2070 ft. Bristol Oil & Mineral Co.'s Desire Dreaux 1, St. Landry Parish, 1147 ft W and 1352 ft N of SE cor sec 15-8s-3e, r to set 6-inch cas 2180 ft. Yount-Lee Oil Co.'s Stateland 1, Cameron Parish, Hackberry dome, 1000 ft N and 1197 ft E of SW cor of sec 16-12s-10w, preparing to test 3900 ft sand. Pure Oil Co.'s Sweetlake 2, Cameron Parish, dr 4944 water sand; Sallier 2, Calcasieu Parish, dr 4517 ft. Vacuum Oil Co.'s Miller 7, 500 ft W of No. 3, bldg bridges; Miller 8, 400 ft N of No. 3, bldg bridges; Miller 9, 400 ft N and 100 ft E of No. 4, lcn. Rio Bravo Oil Co.'s Glenwild 1, St. Mary's Parish, on Glenwild 4500-acre plantation, dr 1060 ft gumbo.

San Antonio District Wildcats

BEXAR COUNTY—Ballard & Underwood's Easterwood, coring at 5331 ft.

CALDWELL COUNTY—Van Kueren Oil Co.'s Rideout 1, lcn. United North & South Oil Co.'s Kelly 1, dr; Tiller 1, dr; Brown 1, dr; Tabor, dr; A Merci, dr; Rios, dr; Allen, dr. E. L. Smith Oil Co.'s Davis 1, preparing to spud in. Gulf Production Co.'s Kennedy 1, dr 2050 ft. Detex Oil Co.'s Walker 1, producing 2 bbls at 2375 ft, may abn; Bridges 1, dr.

DUVAL COUNTY — Associated Oil Co.'s Sutherland 1, dr. Humble Oil Refining Co.'s Hagist 1, dr. United States Gas & Oil Co.'s Peters 1, set cas; Duval 1, spd in Moody-Seagraves-Morgan's Mesquite 1, dr below 1400 ft; Walsh 1, dk. Grayburg Oil Co.'s Halff 1, lcn.

GUADALUPE COUNTY—Dunning & Armstrong's Jarvis Dale 1, dk. Magnolia Pet. Co.'s Day 1, dr at 3900 ft caving. Howell et al's Louis Willman, dr. Smith-Payne-Bond's Duran 1, dk.

JIM HOGG COUNTY — Rydal-Rycade Oil Co.'s Allen 1, dr. Beaucamp et al's Vela 1, dr. Andrews Pet. Co. M. S. Bank 1, dr below 2230 ft. Simms Oil Co.'s 1, survey 233, lcn.

STARR COUNTY—O. W. Killam's Guerra 1, dr.

ZAPATA COUNTY — Texas Co.'s Jennings 2, dr below 3000 ft.

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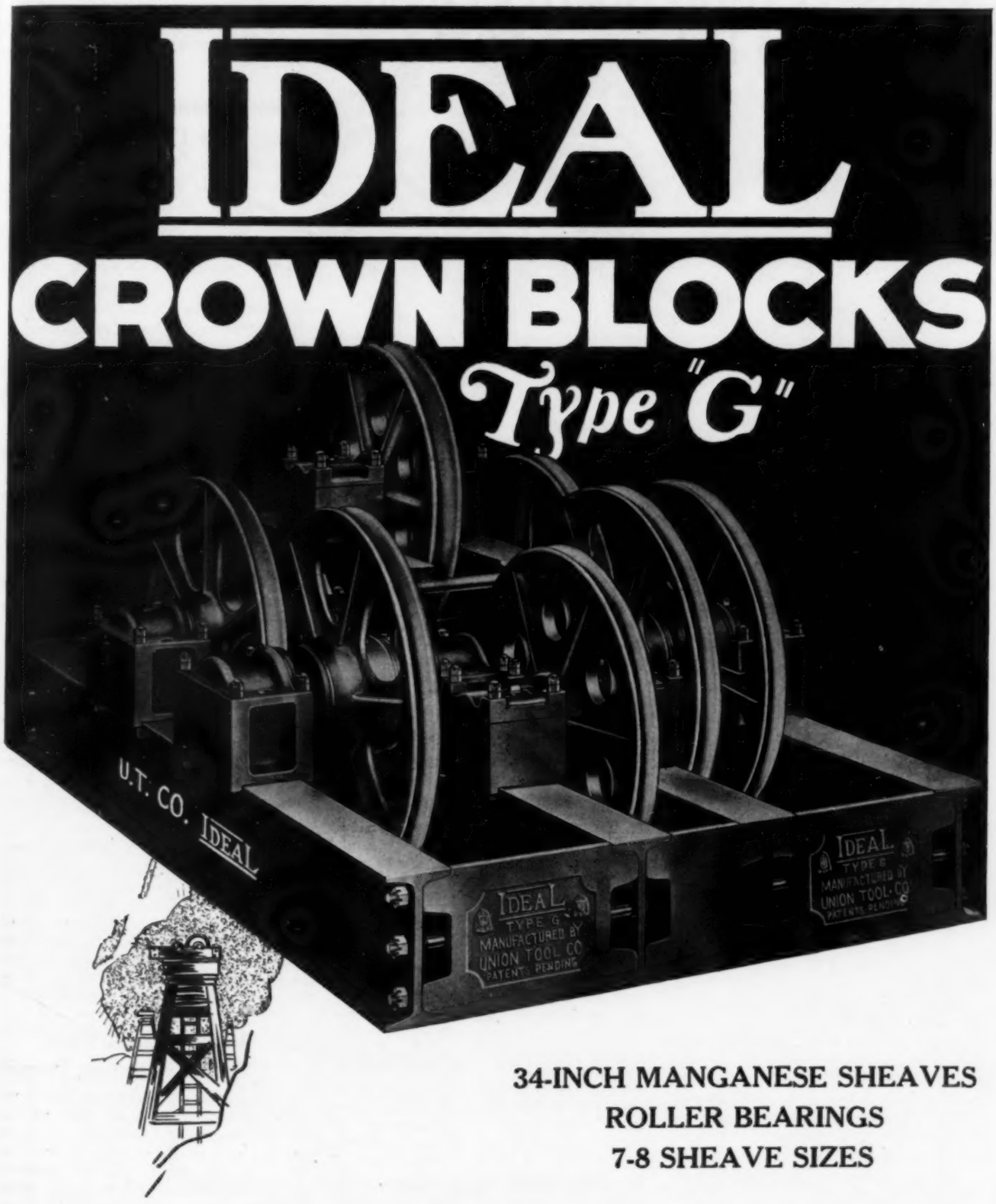

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THE NATIONAL SUPPLY COMPANIES

Say you saw it in The OIL WEEKLY

Conservation Board's Open Hearing February 10-11

Washington, D. C.—The Secretary of the Interior, Hon. Hubert Work, as chairman of the Federal Oil Conservation Board, today designated February 10 and 11 as dates on which public hearings will be held by the board to enable representatives of the oil industry to be present and express their views relative to national petroleum conditions.

Secretary Work said the two days will be devoted to hearing the industry's representatives, and those desiring to submit lengthy arguments, statistical and other data, will be invited to render such extended views in writing within 10 days immediately following the public hearings. After the formal hearings have been completed, an opportunity will be given for limited discussion outside of the arranged program.

It is the desire of the board, the chairman said, to hear from all schools of thought in the industry. It is expected that the following may be present to give their views: Amos L. Beaty, president, The Texas Company; W. N. Davis, president, Mid-Continent Oil and Gas Association; George S. Davison, president, Gulf Refining Company; Henry L. Doherty; C. F. Kettering, president, General Motors Research Corporation; K. R. Kingsbury, president Standard Oil Company of California; J. O. Lewis, Consulting Petroleum Engineer; L. V. Nicholas, president, National Petroleum Marketers Association; Thomas A. O'Donnell, Associated Oil Company; J. Edgar Pew, president, American Petroleum Institute; Mark L. Requa; John D. Rockefeller, Jr.; W. C. Teagle, Standard Oil Company of New Jersey; Prof. Lester C. Uren, University of California.

Others who may wish to appear at the public hearings have been invited to communicate with the chairman, stating the topic it is desired to discuss, in order that the board's program may be formulated with some degree of continuity and the subjects grouped for the guidance of the board and those attending the hearings.

"The board has an open mind," Secretary Work said. "The industry has willingly and fully responded to the government's request for specific data relating to petroleum conditions. The views expressed are divergent, the statements supplied conflict in some instances, and the conclusions arrived at represent apparently two distinct schools of thought. The board, however, is not inclined at this time to accept any of the expressions as conclusive, but rather is hopeful for further elucidation from those who may be willing to amplify or submit additional basic facts.

"The government is a large producer of petroleum, the custodian of great tracts of actual and potential oil lands, and the government wishes to benefit, constructively and lastingly, by the facts to be eventually adduced from the present inquiry. At the same time the industry itself can perform a duty to its own pioneers and those executives who now control enormously valuable oil lands.

"From the governmental inquiry much good may come to the government and to the industry, and when this board has rendered its report, based upon official and unofficial data, it wants to feel that it has performed a service not only for the industry but to the nation as well. In the final analysis it is desired that all branches of the industry may feel they have been accorded full and free opportunity to present their 'side of the matter.' The hearings will be held in the office of the Secretary of the Interior, beginning at 11 a. m. and will be open to the public."

Government Would Limit Leases to Individuals

Washington, D. C. — Legislation amending the leasing act of February 25, 1920, so as to limit the acreage to be held by any one person or organization under oil or gas leases or permits has been introduced in the senate by Senator Stanfield of Oregon, and in the house by Representative Sinnott of the same state, by request of the Interior Department.

The measures provide that no person, association or corporation shall take or hold at one time oil or gas leases or permits exceeding in the aggregate 7680 acres in any one state, and not more than 2560 acres within the geologic structure of any one producing oil or gas field. It is also provided that no person, association or corporation shall have at any one time any interests as a member of an association or as a stockholder of a corporation holding leases or permits which, together with the area embraced in any direct holding of leases or permits, or with any other interests, would exceed these limits.

It is provided, however, that any ownership or interest thus forbidden which may be acquired by descent, will, judgment or decree may be held for two years after its acquisition, and also that these limitations shall not prevent lessees from combining their interests for refinery, pipe line or other similar operations.

Violations of the law would be punishable by forfeiture of the leases involved.

Senate Committee Agrees On Depletion Changes

Washington, D. C.—A number of changes in the depletion provisions of the pending revenue bill have been agreed upon by the senate finance committee in order to clarify the situation and to permit the handling of this work in a way that will eliminate the criticism that has been laid against the administration of these provisions by the treasury department.

Following extended conferences with representatives of the oil industry, who have been in Washington for more than a week for the purpose, the committee decided to separate the oil well depletion provisions from those dealing with metal mines depletion, and adopted the following provisions regarding the former, submitted by Senator Curtis of Kansas:

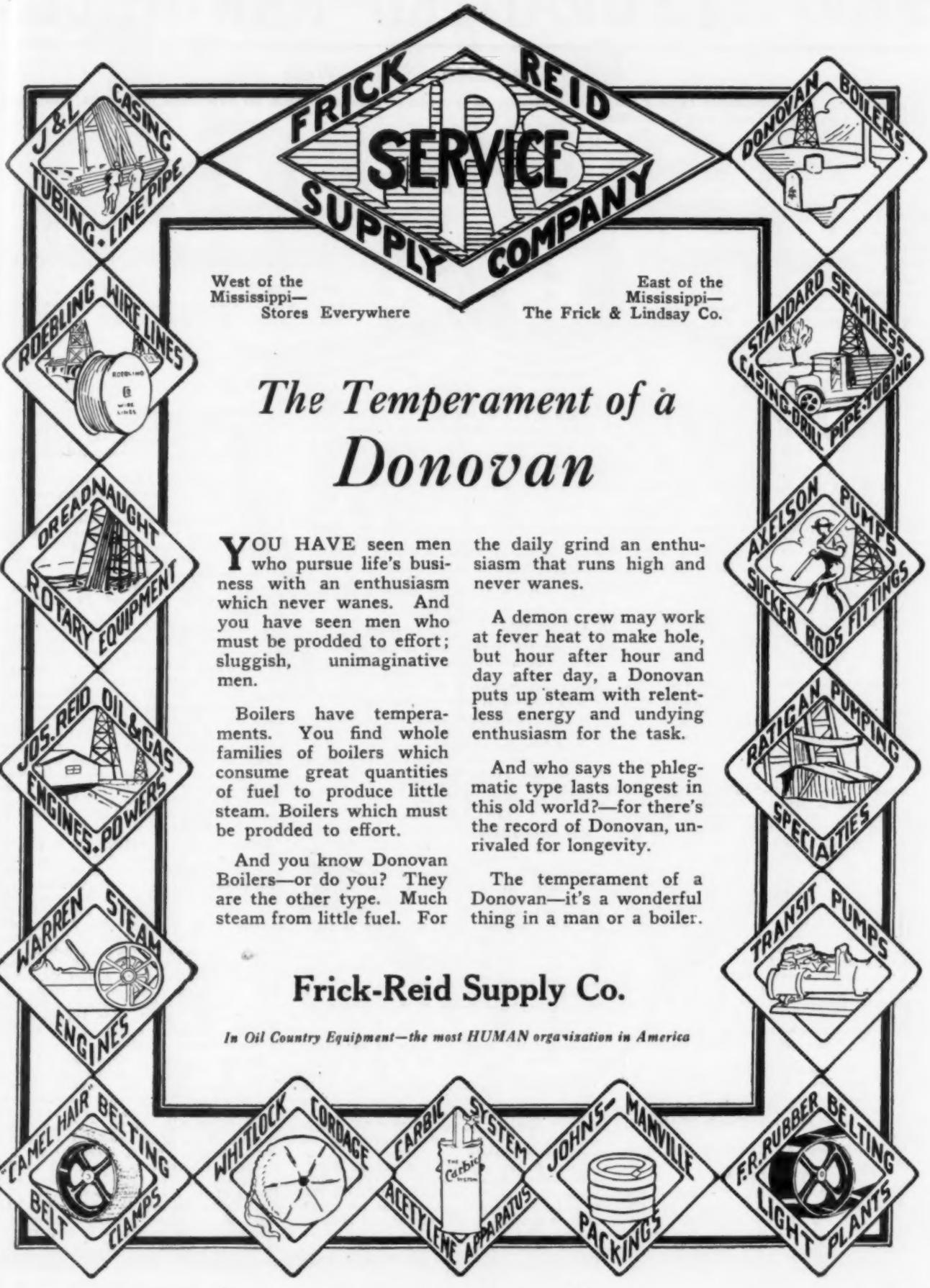
"In the case of oil and gas wells the allowance for depletion from and after December 31, 1924, shall be 25 per cent of the gross income from the property during the taxable year; Provided, such allowance shall not exceed 50 per cent of the net income of the taxpayer (computed without allowance for depletion) from the property except that in no case shall the depletion allowance be less than it would be if computed without reference to this paragraph."

The matter has not been closed, however, it was stated by Senator Smoot, chairman of the committee, it being the desire of the committee to have its experts figure out how this proposal will operate and then possibly to change the 25 per cent rate up or down as may be found necessary to bring about the desired revenue-raising results.

Law Would Extend Time On Government Permits

Washington, D. C.—Permittees under the leasing act of 1920 unable, through no fault of their own, to begin drilling operations or to drill wells of the depth and within the time required by the law would be given an additional period of two years in which to meet requirements, under the terms of a bill introduced in congress by Senator Cameron of Arizona.

The measure also provides that holders of permits already expired because of lack of authority under existing law to make further extensions may secure the two-year extension, from the date of the passage of the act, upon application to the Secretary of the Interior.



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East of the Mississippi— The Frick & Lindsay Co.

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YOU HAVE seen men who pursue life's business with an enthusiasm which never wanes. And you have seen men who must be prodded to effort; sluggish, unimaginative men.

Boilers have temperaments. You find whole families of boilers which consume great quantities of fuel to produce little steam. Boilers which must be prodded to effort.

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A demon crew may work at fever heat to make hole, but hour after hour and day after day, a Donovan puts up steam with relentless energy and undying enthusiasm for the task.

And who says the phlegmatic type lasts longest in this old world?—for there's the record of Donovan, unrivaled for longevity.

The temperament of a Donovan—it's a wonderful thing in a man or a boiler.

Frick-Reid Supply Co.

In Oil Country Equipment—the most HUMAN organization in America

PERMITS GRANTED FOR NEW WELLS

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

Number of Wells for Week Ending

	Oct. 2	Oct. 9	Oct. 16	Oct. 23	Oct. 30	Nov. 6	Nov. 13	Nov. 20	Nov. 27	Dec. 4	Dec. 11	Dec. 18	Dec. 25	Jan. 1	Jan. 8	Jan. 15
Kansas	26	35	37	16	22	23	21	37	35	29	35	28	32	40	30	23
Oklahoma	81	67	48	52	76	63	86	60	106	86	73	75	95	76	78	60
Arkansas	..	38	21	9	14	..	18	10	16	10	22	11	15	10	18	10
Louisiana	16	12	13	11	6	9	15	6	15	17	15	15	7	12	15	17
Texas	159	179	133	183	202	156	171	174	126	253	203	210	199	167	111	162
California	29	22	27	23	18	16	23	25	23	23	22	42	40	17	25	28
Total	291	353	279	294	338	267	334	312	321	418	370	381	388	322	277	300

ARKANSAS

Ouachita County—Ohio Oil Co.'s Cramer 18, 27-15-16, 200 ft N and E of SWc NE¼ NW¼.

Union County—E. M. Jones' Murphy 6, 17-16-15, 200 ft N and 150 ft E of SWc E½ NW¼ NE¼; Murphy 7, 17-16-15, 660 ft N and 175 ft E of SWc NE¼ NE¼; Murphy 8, 17-16-15, 602 ft S and 718 ft E of NWc NW¼ NE¼; Murphy 9, 17-16-15, 450 ft S and 178 ft W of NEc NW¼ NE¼. Miles Trustee's Miller 1, 35-17-16, NEc SE¼ NE¼. Natural Gas & Fuel Corp.'s Murphy A-5, 17-16-15, 150 ft N and 510 ft W of SEc NE¼ NE¼. Southern Crude Oil Purch. Co.'s Lawton 5, 7-16-15, 210 ft S and 300 ft E of NWc NE¼ SW¼. Sun Oil Co.'s Hatfield 7, 6-16-15, 150 ft N and E of SWc SE¼ SE¼. Wingfield et al's Dumas 1, 9-17-16, NWc of section.

CALIFORNIA

Coalinga Field—Pacific Oil Co.'s No. 36, 13-20-14.

Conejo Field—Surprise Oil Synd.'s No. 11, 33-2-20.

Inglewood Field — Standard Oil Co.'s Los Angeles Investment Co. 1-41, 17-2-14.

Fresno County Field — Bald Mountain Drilling Co.'s No. 1, 20-20-13.

Kern County Field—King, Zier & Kettleman's No. 1, 13-25-19.

Kings County Field—South Coalingo Oil Co.'s Clarence G. Smith 1, 35-24-19.

Long Beach Field—Havenstrite & Baker's H. & B. 4, 13-4-13. J. M. Cooper's No. 1, 13-4-13. W. O. Todd's No. 1, 13-4-13. Featherstone & Preston's Featherstone 14, 13-4-13. Lindauer Oil Co.'s No. 3, 13-4-13. Transport Oil Co.'s No. 15, 13-4-13. Aiken & Delaney's No. 1, 13-4-13. M. A. Fox's Fox-O'Neill 1, 13-4-13. M. L. Boles' No. 1, 13-4-13. James E. O'Donnell's Berry 1, 19-4-12. E. S. Bruce's Bruce 2, 18-4-12. Marine Corp.'s No. 54, 13-4-13. E. L. Cragen's No. 2, 13-4-13. Bess Oil Co.'s No. 2, 13-4-13.

Los Angeles County Field—Marland Oil Co.'s Connolly 1, 26-2-14.

Newport Field—Julian Pet. Corp.'s Mesa 5, 21-6-10.

Rosecrans Field—Barnsdall Oil Co.'s O'Dea 9, 18-3-13. Union Oil Co.'s Rosecrans 7, 19-3-13.

Santa Fe Springs Field—California Pet. Corp.'s Wickham 2-A, 5-3-11.

Sespe Field—Ruth J. Bishop's No. 1, 34-5-19.

Torrance Field—Shell Co.'s Redondo Comm. 7, 9-4-14. California Pet. Corp.'s Waldron 2, 8-4-14.

Ventura County—Associated Oil Co.'s Hartmen 3, 22-3-23.

LOUISIANA

Bossier Parish—Louisiana Oil Refg. Corp.'s Bodcaw D-28, 15-19N-11W, 150 ft S and 499 ft W of NE cor of SW¼ of SE¼.

Caddo Parish—Dixie Oil Co.'s Donovan 2, 21-22N-15W, 1290 ft W and 390 ft N of SE cor of NE¼. Standard Oil Co. of La.'s J. J. Hart 11, 34-21N-16W, 200 ft S and 300 ft E of NW cor of sec. The Texas Co.'s D. H. & G. A. Raines 7, 27-21N-15W, 500 ft S and 200 ft E of NW cor of NE¼.

Calcasieu Parish—Gulf Refg. Co. of La.'s Gardner-Noble-Gray 65, 33-10S-12W, appr. 466 ft S and 50 ft E of NW cor of NE¼ of SE¼.

Jefferson Davis Parish—Union Sulphur Co.'s Sturdivant 1, 26-10S-4W, 335 ft S and 208 ft E of NW cor of NW¼ of NW¼. Yount-Lee Oil Co.'s P. & M. Oil Co. 1, 21-9S-5W, 482 ft W and 80 ft N of SE cor of sec.

La Salle Parish—Atlantic Oil Prod. Co.'s Tullos 1, 26-10N-1E, 150 ft W and 150 ft N of SE cor of NE¼ of NE¼. O. W. Clark, Tr.'s Miles 1, 26-10N-1E, 300 ft E and 200 ft N of SW cor of NW¼ of NW¼; Tullos 1, 23-10N-1E, 300 ft N and 150 ft W of SE cor of SE¼ of SW¼. Natural Gas & Fuel Corp.'s Tullos 3, 25-10N-1E, 105 ft S and 105 ft E of NW cor of NW¼ SW¼; Tullos 4, 25-10N-1E, 670 ft S and 150 ft E of NW cor of NW¼ of SW¼; Tullos 5, 25-10N-1E, 330 ft E and 150 ft N of SW cor of NW¼ of SW¼; Tullos 6, 25-10N-1E, 150 ft N and 150 ft W of SE cor of NW¼ of SW¼. Ohio Oil Co.'s Urania 2, 24-10N-1E, 331 ft E and 152 ft S of NW cor of NE¼ of NE¼.

Webster Parish—Gulf Refg. Co. of La.'s S. P. D. Coyle 1, 21-21N-10W, 1015 ft S and 295 ft E of NW cor of NE¼.

Winn Parish—Cedar Creek Pet. Co.'s J. F. Sullivan A-1, 6-10N-2W, 291 ft N and 330 ft E of SW cor of NW¼ of NE¼.

OKLAHOMA

Kay County—Comar Oil Co.'s No. 8 Priboth, southeast corner of the northeast of the northwest of 21-29-1w; No. 8 Duncan, northeast corner of the northwest of the southwest of 21-29-1w; No. 6 McCormick, southeast corner of the northwest of the southeast of 21-29-1w, old well deepened. The Texas Co.'s No. 2 Burkholder, northwest corner of 9-27-1w. Harris & Hahn's No. 4 Brown, center of the northwest of the southwest of 9-27-1w; Tom Palmer et al's No. 1, northeast corner of the northwest of 28-26-1w.

Grant County—Gypsy Oil Co.'s No. 1 Muegge, southeast corner of the northwest of 33-26-3w.

Noble County—Magnolia & Bu-Vi-Bar Pet. companies' No. 2 Sams, center of the southwest of the northwest of the southwest of 15-21-2w.

Kingfisher County—Bu-Vi-Bar Pet. Co.'s No. 1, southeast corner of the northwest of 11-19-9. Reiter Foster Oil Corp.'s No. 1 Davidson, southwest corner of 23-15-5w. Hoffman et al's No. 1, northwest corner of the northeast of 20-15-8w.

Osage County—Thompson & Black's No. 1, center of the southeast of the southwest of the southeast of 20-22-8. Finance & Delmar's No. 6, center of the north line of the south half of the north half of the southwest of 18-22-11. Continental Oil Co.'s No. 3, northwest corner of the southwest of 28-20-12. Westland Oil Co.'s No. 2, northeast corner of the southeast of 29-20-12. Winona Oil Co.'s No. 3, southeast corner of the northeast of 29-20-12.

Pawnee County—Southwestern Oil Fields Corp.'s No. 17 Wasson, center of the west line of the southwest of the northwest of 24-20-8.

Pattawatomie County — J. W. McCullouch's No. 1 Madgett, northwest corner of the 25-10-4.

Lincoln County—Gypsy Oil Co.'s No. 9 Cages, northwest corner of the southeast of 35-15-5.

Jefferson County—Gypsy Oil Co.'s No. 12 Seay, northwest corner of the southwest of the northeast of 33-6s-5w.

Tulsa County—Black, Sivalls & Bryson's No. 10 Crosby, center of the west line of the southeast of the northwest of 17-17-13. Burk Gibbs' No. 6 Mason, center of the southwest of the northeast of 16-16-14.

Wagoner County—Wm. Sloman's No. 1 Lewis, southeast corner of the southeast of 19-17-16.

Creek County—Gled Oil Co.'s No. 2 Peters, center of the south line of the northwest of the northwest of 13-19-8. Magnolia Pet. Co.'s No. 1 Wattie, southwest corner of the northeast of 6-15-7, old well deepened. C. G. Tibbens' No. 2 Herrod, twin, southwest corner of the northeast of 25-15-8. Southwestern Pet. Co.'s No. 2 Roberson, southwest corner of the northwest of the northwest of 11-14-5. Transcontinental Oil Co.'s No. 1 Barnett, southeast corner of the southwest of the northeast of 28-17-11. C. G. Tibbens' No. 1 Unallotted, southeast corner of the northeast of the southeast of the northwest of 30-15-9. Transcontinental Oil Co.'s No. 1 Wright, southeast corner of the southwest of 31-14-9.

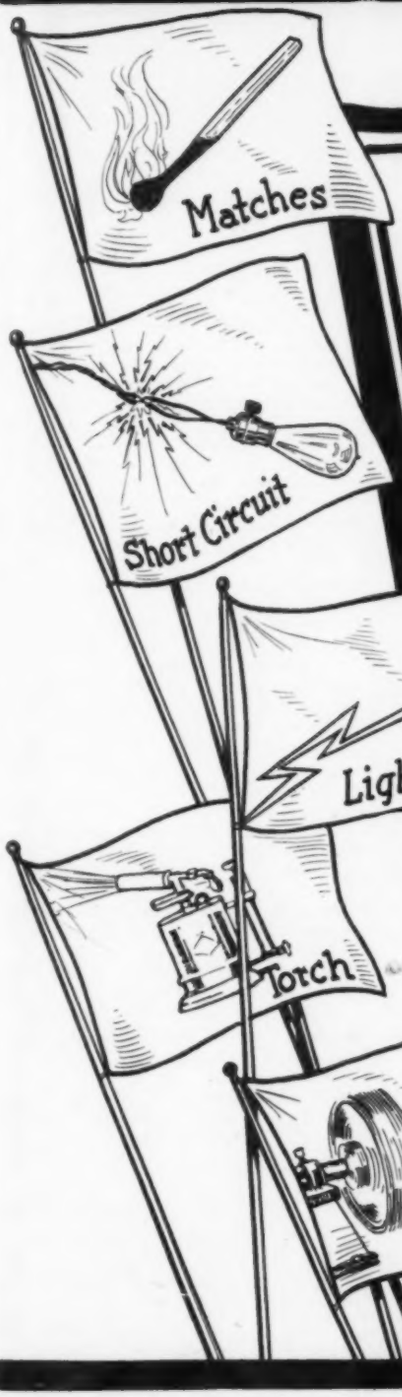
Payne County—Deep Rock Oil & Gas Co.'s No. 5 Derry, southwest corner of the northwest of the southeast of 23-18-3; No. 2 Shannon, northwest corner of the northeast of the southwest of 23-18-3; No. 5 Boyles, northwest corner of the southwest of the southeast of 23-18-3. P. & R. Corp.'s No. 2 Goss, northeast corner of the southeast of the southwest of 7-8-5. Marland Oil Co.'s No. 3 Blue, northwest corner of the southwest of the southeast of 7-18-5. Mulberry Oil & Gas Co.'s No. 3 Flint, northwest corner of the southwest of 5-17-4; No. 1, northwest corner of the northeast of 6-17-4. N. Y. Okla. Oil Co.'s No. 3 Hamilton, southeast corner of the northwest of the northeast of 32-16-9.

Okmulgee County—Independent Oil & Gas Co.'s No. 14 Haskins, center of the south line of the southwest of the northwest of 27-16-12. Kingwood Oil Co.'s No. 1 Colbert, northeast corner of the southeast of 21-14-12. Hazlett & Campbell et al's No. 1 Kannard, center of the west line of the southwest of the southeast of 25-14-12. M. C. French et al's No. 3 Hawkins, southwest corner of the northeast of the northeast of 7-11-12. Callahan et al's No. 2a Doyle, center of the north line of the southeast of the southwest of 15-13-14. Lambert's No. 2 Segro, southeast corner of the northwest of the northwest of 20-13-15.

Muskogee County—W. F. Meagher's No. 4 Smith, northwest corner of the southwest of 14-15-15.

Okfuskee County—Independent Oil & Gas Co.'s No. 1 Hull, northwest corner of the southeast of 15-12-11. Josey Oil Co.'s No. 4

danger



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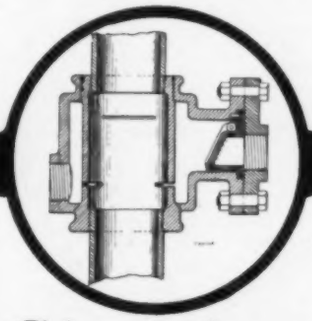

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It pays for itself as a Tool Cleaner.

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Demand a Simplex—the only Snuffer with a safety valve. Order through your Supply House.

McCoy, southeast corner of the northwest of the southwest of 33-12-11, old well depened.

Seminole County—J. T. Parks' No. 1 Davis, southwest corner of the southeast of the southwest of 27-9-6. Magnolia Pet. Co.'s No. 5 Franz, southeast corner of the southwest of the southwest of 32-8-8. Atlantic Oil Prod. Co.'s No. 1 McIntosh, northeast corner of 7-7-8.

Hughes County—Minnehoma Oil Co.'s No. 4 Cain, center of the southwest of the southeast of the northeast of 1-9-9. J. W. McCullouch's No. 1 Wesley, southeast corner of the northeast of the northwest of 1-8-10.

Grady County—Skelly Oil Co.'s No. 1 Moss, center of the northwest of the northeast of 11-4n-8w.

Stephens County—Magnolia Pet. Co.'s No. 1 Hardy, northeast corner of the southwest of 30-2n-9w. Winkle & McQueen's No. 3 Springer, center of the east line of the southwest of the northwest of 28-1s-8w. Amerado Pet. Co.'s No. 3 Blaydes, southwest corner of the northeast of the northeast of 32-1s-8w, old well deepened and now completed. McMann Oil Co.'s No. 10 Stephens, center of the north line of the southwest of the northwest of 33-1s-8w, old well deepened. Pace et al's No. 1 Denham, southwest corner of the southeast of the southeast of the northeast of 11-2s-8w. Commercial Pet. Co.'s No. 6-B Fobb, northeast corner of the southwest of the northeast of the southwest of 12-2s-8w. Magnolia Pet. Co.'s No. 9 Cobb, northeast corner of the southwest of the northwest of 8-2s-4w.

KANSAS

Butler County—Garden et al's No. 1 Deichman, northwest corner of 23-29-6.

Cowley County — J. A. Hull's No. 14 Kukuk, center of the east line of the northeast of the southwest of the northeast of 24-32-4; No. 14 Wallace, southeast corner of the northeast of the southeast of 24-32-4. Duffield et al's No. 2 Cant, northwest corner of the southwest of the southwest of the 19-32-5.

Greenwood County—Transcontinental Oil Co.'s No. 1 Pixley, northwest corner of the southwest of the northeast of 3-22-10. Empire Gas & Fuel Co.'s No. 2 Atyeo, northwest corner of the northeast of the northwest of 6-22-10; No. 3 Atyeo, southeast corner of the northeast of the northwest of 6-22-10; No. 4 Atyeco, southwest corner of the northeast of the northwest of 6-22-10. Davis Hazlett et al's No. 10 De Malore, northwest corner of the southwest of the southeast of 12-22-10. Greenland Oil Co.'s No. 1 Huntinger, southwest corner of the northwest of the northeast of 12-22-10. Empire Gas & Fuel Co.'s No. 7 Frome, southwest corner of the northeast of the northwest of 14-22-11; No. 6 Kellison, southeast corner of the southwest of the northwest of 14-22-11. Mid-Continent Pet. Corp.'s No. 6 Clopton, center of the east line of the southwest of the northeast of the southwest of 18-22-11. Phillips Pet. Co.'s No. 9 Morris, northeast corner of the northwest of the northeast of the southwest of 19-32-9. Roth & Farout's No. 2 Stoughton, southeast corner of the northwest of the southeast of the southeast of 9-23-10. Pure Oil Co.'s No. 6 Mason, northwest corner of the southwest of the northwest of the northwest of 26-23-10. Roth & Farout's No. 1 Hayes, southeast corner of the southwest of the northeast of 35-25-11.

Lyons County—Transcontinental Oil Co.'s No. 2 Jones, southwest corner of the southeast of the southwest of 30-21-10. Sheedy et al's No. 1 Ayteo, southeast corner of the southwest of 31-21-10; No. 2 Atyeo, southwest corner of the southeast of the southwest of 31-21-10. Titus et al's No. 1 Pixley, southwest corner of the northwest of the southeast of 34-21-10.

Sumner County—Marland Oil Co.'s No. 1 Corpenbargen, southwest corner of the northwest of 24-34-2e.

Woodson County—Wood, Alter et al's No. 1 Robinson, southwest corner of the northwest of the southwest of 16-25-15.

TEXAS

Archer County — Simms Oil Co.'s Magnolia Bldg., Dallas, S. Cowan 1, B 39, J.C.S.L. sur, 150 ft to N and W lines. Staley & Wynne, Staley Bldg., Wichita Falls, Parrish 2B, B 84, Amer. Trib. 150 ft to N and E lines, 3B, B 45, Amer. Trib. sur, 150 ft to S and E lines; 4B, B 83, Amer. Trib. sur 150 ft to N and W lines. Texhoma Oil & Ref. Co., Wichita Falls, A. M. Kunkel 2, G. Stell sur, 150 ft to S and W lines. Muse & Robertson, Box 434, Wichita Falls, A. P. Jackson 1, W. B. Aldridge sur, 450 ft to N and 150 ft to W line. J. H. White, Kansas City, Mo., Fee 2, B 42, Amer. Trib. sur, 150 ft to W and 470 ft to S line. Gulf Prod. Co., Fort Worth, A. P. Nichols 20, S 37, Amer. Trib. sur, 400 ft W No. 18; 21, same sur, 750 ft S No. 15; P. Siegel 10, S 22, E Hall sur, 50 ft E No. 4; 11, same sur, 50 ft E No. 1 Phillips Petroleum Co., Bartlesville, Okla., J. H. White 91, B 34, Amer. Trib. 150 ft to W and 750 to S line. Empire Gas & Fuel Co., Staley Bldg., Wichita Falls, L. F. Wilson 11E, S 85, Amer. Trib. sur, 300 ft N No. 9. Magnolia Pet. Co., Dallas, M. Rutty 7, J. O. Reilly sur. Roxana Pet. Corp., South Bend, J. Krueger 1, 2434 TE&L sur, 150 ft to N and W lines. Humble Oil & Ref. Co., Wichita Falls, L. F. Wilson 5, S 125, Amer. Trib. sur, 38 ft S No. 2. Cook & McElreath, Harvey-Snider Bldg., Wichita Falls, J. Krueger 2, 2434 TE&L sur, 150 ft to S and W lines. Prairie Oil & Gas Co., Ranger, Krueger 1, 2434 TE&L sur, 150 ft to N and E lines. Caldwell Pet. Co., Olney, Hutchison 4, B 12, Powers sur, 450 ft to W and 150 ft to N line. Trio Prod. Co., Box 126, Olney, M. Brom 13, 1582 TE&L sur, 300 ft N No. 12; 12, same sur, 1050 ft to E and 150 ft to S line. Empire Gas & Fuel Co., Staley Bldg., Wichita Falls, L. F. Wilson A3, B 26, Amer. Trib. sur, 750 ft to W and 490 ft to S line. Murchison & Fain Oil Co., Wichita Falls, W. J. McCluer 1, B 13, I. Holman. Young & Looney's Archer City, C & P 1, B 72, H. Corzine 450 ft to N and 150 ft to W line. Texas Co., Wichita Falls, W. L. Anderson 2, R. Carson sur, 575 ft to N and 950 ft to E line. P. Langford 1, B 148, Club Ranch sur 2215 ft to W and 200 ft to S line. Texhoma Oil & Ref. Co., Wichita Falls, C. L. Abercrombie 3, S 2, S. P. Ry sur, 150 ft to W and 860 ft to S line. S. E. Oldham 1, E. Hubbell sur, 150 ft to S and W lines. Consolidated Oil Co. of Texas, Wichita Falls, J. Kreeger 1, 2434 TE&L sur, 150 ft to S and W lines. Atlantic Oil Prod. Co., Magnolia Bldg., Dallas, Fallas C. S. L. 2, B 63, F.C.S.L. sur, 300 ft S No. 1. Darilek Lease Acct., Box 949, Wichita Falls, J. Darilek 6, 1582 TE&L sur, 300 ft E No. 5. Oil Investment Co., Staley Bldg., Wichita Falls, Fee 12, B 6, J. Richards sur, 300 ft SW No. 11. Burns & Maxson, Wichita Falls, E. T. Brown 2, Amer. Trib sur, 150 ft to N and W lines; 3; same sur, 150 ft to S and W lines. Bridwell, Heydrick & Clark, First Nat. Bank Bldg., Wichita Falls. G. M. Boren 4, R. Neuman sur, 135 ft to N and 360 ft to W line. M. L. Lewis et al's Box 331, Wichita Falls, A. D. Thomas 2, B 21, Amer. Trib. sur 450 ft to W and 150 ft to N line.

Brown County—J. L. Nelson, Wichita Falls, W. M. Graham 1, J. Brown sur, 150 ft to S and W lines. Owens Oil Co. & Shuler & Davies Co., Brownwood, G. M. Grooms 5, J. M. Ross sur, 317 ft E No. 2. Moore & Connelly et al, Cross Plains, J. E. Harrell 1, C.C. S.L. sur, 1200 ft to W and 200 ft to S line. Simms Oil Co., Magnolia Bldg., Dallas, G. B. Gaines A5, W. M. Miller sur, 160 ft to N and E lines. S. C. Wagley, Bangs, L. L. Childress 1, B 10, E. T. Ry sur, 750 ft to E and 150 ft S line. Hepburn Oil Co., Brownwood, S. G. Gaines 1, N. Jordan 1, 375 ft to N and W lines. S. A. Mims, Fort Worth, G. B. Gaines 1, W. B. Travis sur, 150 ft to N and W lines. Ralph, Counts & Wear, Brownwood, W. J. Livingston 1, 614 M. Flores sur, 450 ft to N and 160 ft to E line. Gilman-McMurray et al, Box 117, Cisco, W. H. G. Chambers 5, W. B. Smith sur, 2050 ft to W and 155 ft to S line; 6, same sur, 2350 ft to W and 155 ft to S line.

Callahan County—A. S. Hatch, Rising Star, Mrs. Prewit 1, 2278 TE&L sur, 150 ft to S and W lines. H Y Oil Co., Fort Worth, G. C. Woods 23, 2299 TE&L sur, 1600 ft to N and 900 ft to W line. W. C. Leak, Cisco, J. A. Heyser 2, S 22, H&H sur, 150 ft to W and 450 ft to N line. Graham & Lash, Moran, E. J. Eubank 3, S 4, D&D Asy. sur, 300 ft W No. 2. Colony Oil Co., Ward Bldg., Wichita Falls, J. S. Burnam 16, 2288 TE&L sur, 150 ft to W and 450 ft to N line. W. R. Andrews et al, Putnam, R. D. Williams 48, 2974 TE&L sur, 475 ft to S in center of line. Cranfill & Reynolds, Cisco, E. F. Bond 10, B 72, C.C.S.L. sur, 300 ft S No. 8; 11, same sur, 300 ft W No. 9. Kuhlemeier & Kleine Oil Co., Cisco, W. E. Pruett 9, 2278 TE&L sur, 1050 ft to W & 450 ft to S line. W. B. Flynn, Beaumont, L. J. Kelly 5, 2281 TE&L sur, 1350 ft to N and 1650 ft to E line. Z. J. Malone, S 172, M. Izod sur, SE cor (Coleman County). Warren & Hayes, Box 576, Cisco. Clinton 1, S 16, Bayland Asy. sur, 150 ft to N and W lines. Shertzer Bros., Cisco. Anthony 7, S 3, L. A. L. sur, 300 ft W No. 6. E. M. Curry et al, Cross Plains, C. C. Westerman 4, C.C.S.L. sur, 450 ft to N and W lines. Bliss & Wetherbee, Shreveport, La., F. E. Hayden 1, B 116, Univ. Lands sur, 150 ft to N and E lines. M. A. Hudson, Corsicana, A. J. Mathis 1, B 39, Central Add., center of NE¼. Brown & Co., Inc., Box 178, Cisco. E. E. Henderson 3, B 73, C.C.S.L. sur, 325 ft N No. 2. Simons & Simons, Putnam, H. Wagley 3, 2999 TE&L sur, 1350 ft to W and 150 ft to N line.

Clay County — Geo. L. Pace, Staley Bldg., Wichita Falls, C. Kafer 1, B 65, P.C.S.L. sur, 150 ft to S and W lines. Lowry Oil Corp., Brown Bldg., Wichita Falls, J. F. Johnson 1, McKenzie sur, 150 ft to N and E lines. Texas Co., Wichita Falls, M. Jones 4, MEP&P Ry sur, 250 ft to S and W lines.

Coleman County—Sunflower Pet. Co., Coleman, J. W. Gates 4, 734 S. Crooks sur, 750 ft to N and W lines. Z. J. Malone, 208 W 10th St., Cisco, R. Tahte 1, S 172, M. Izod sur, SE cor. Canyon Oil & Gas Co. & Cromwell Oil & Gas Co., Cross Plains, J. W. Harris 11A, Wm. Mason sur, SE cor. Kelly & Rowan, Gunter Hotel, San Antonio, R. D. Kennedy 1, B 673, 150 ft to S and E lines.

Caldwell County—United North & South Oil Co., Luling, W. M. Mercer 6, J. Berry sur, 400 ft SE No. 2.

Carson County—B. S. Barnes, Atlas Bldg., Tulsa, Okla., Burnett 1, sec 65, blk 5, I&GN Ry sur, 330 ft to S and W lines. Magnolia Pet. Co., Dallas, H. Burnett 2, sec 115, blk 5, I&GN Ry sur, 660 ft W No. 1.

Duval County—Humble Oil & Ref. Co., Houston, Walsh 5, 185 J. Poitevent sur, 450 ft SE No. 4.

Eastland County—Magnolia Pet. Co., Dallas, P. O. Harris 9, M. Finch sur, 591 ft N No. 6.

Fayette County—Red Bank Oil Co., Castle Bldg., Tulsa, Okla., A. Steinhauser 1, 114 ft to W and 1700 ft to S line.

Fort Bend County—Rycade Oil Corp., Humble Bldg., Houston, B. Wisdom 6, H. N. Cleveland sur, 700 ft to N and 2660 ft to E line.

Galveston County—Sun Oil Co., Magnolia Bldg., Dallas, J. W. Lockhart 7, M. Dunman sur, SW cor of blk 20.

Hardin County—Gulf Prod. Co., Houston, Tarver-Hardin 60, S. Jackson sur, 62 ft to S and 93 ft to E line. T. G. Barkley, Sour Lake. S. C. Bailey 1, blk 6, sec 16, S. Jackson sur, 50 ft to N and E lines.

Hutchinson County — Lenix-Stover-Pattison, Amarillo, M. A. Dimick, sec 11, YM&C sur, 330 ft to N and E lines.

Hunt County—Rycade Oil Corp., Humble Bldg., Houston, M. A. Holden 1, J. McAdams sur, 1339 ft to N and 1150 ft to E line.

Jefferson County—Gulf Prod. Co., Houston. Gladys 216, J. A. Veatch sur, 100 ft to N and W lines of blk 205.

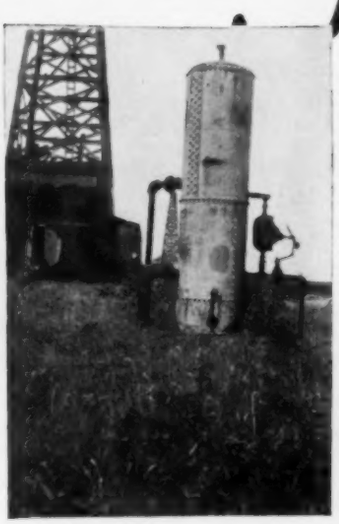
Limestone County—J. K. Hughes Dev. Co., Mexia, E. Ellis 18, P. Varela sur, 300 ft NW No. 1. G. C. Dixon, 1115 W 7th St., Corsicana, W. L. Garrett 1, M. Boren sur, 160 ft to N and 260 ft to W line.

Milam County—Texas Pet. Dev. Co., Box 809, Cameron, Phillips & Garner 4, T. J. Chambers sur, 300 ft W No. 3. Rockdale Dev. Co., Inc., Rockdale, W. E. Gaither 4, T. J. Chambers sur, 150 ft to S and E lines. Noack Oil Co., Rockdale, Camp-Phillips 2, T. J. Chambers sur, 152 ft to N and 163 ft to E line. Anchor Oil Co., Republic Bank Bldg., Dallas, E. Hamilton 11, R. Milby sur, 300 ft W No. 2.

Montague County—Geo. L. Pace, Staley Bldg., Wichita Falls, J. M. Conyers 1, R. H. Grimes sur, 700 ft to W and 600 ft to S line. Texhoma Oil & Ref. Co., Wichita Falls, H. G.

they pay and pay ay y

All gasoline from 20 Burton Stills passed through this No. 2 Smith Separator, saving gas to amount of 250 H. P. to fire boilers. White Eagle, Augusta, Kans.



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Flossmoor Oil & Gas Co., Harris No. 1. Smith Separator handling 2 million cu. ft. gas at 360 lbs. pressure, increased gasoline recovery from 230 gals. to 400 gals. from drip to separator.

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McGaughey 1, Nichols & Graves sur, 150 ft to W and 450 ft to S line.

Maverick County—Humble Oil & Ref. Co., Houston, Sullivan 1, C. Hess sur, 800 ft to S and 400 ft to E line.

Navarro County—G. C. Dixon, 1115 W. 7th St., Corsicana, R. L. Tucker 1, M. Boren sur, NW cor. Sun Oil Co., Dallas, N. R. Adams D-1, M. Boren sur, 150 ft to N and W lines.

Orange County—Rycade Oil Corp., Humble Bldg., Houston, Texas 6-B, Cow Bayou sur, 2000 ft N of bridge.

Panola County—J. C. McCormick, Ricou-Brewster Bldg., Shreveport, La., N. Griffin 1, J. Shandoin sur, 250 ft to N and 150 ft to W line.

Refugio County—Houston-Gulf Gas Co., Cotton Exchange Bldg., Houston, W. Heard 1, W. Heard sur, 200 ft to N and 160 ft to W line.

Reagan County—Krupp & Pickrell, Big Lake, University 1-B, sec 39, blk 9, 300 ft S No. 22.

Shackelford County—Phillips Pet. Co., Bartlesville, Okla., D. Diller 1, sec 42, LAL sur, 150 ft to S and E lines. Roeser & Pendleton, Inc., Breckenridge, W. L. Cook 2, sec 85, ET Ry sur, NE cor. Milton Oil Co., Moran, Edwards 1, B-38, Univ. Lands sur, 600 ft to N and E lines. Dr. Chas. W. Wallace, Wichita Falls, Waters 57, blk 35, Univ. Lands sur, 150 ft to S and W lines. J. C. Findeiss, Wichita, Kansas, J. S. McKeever 1, sec 14, blk 3, HT&B Ry sur, center. Brigham Oil Co., Box 412, Albany, J. A. King 1, 569 TE&L sur, 450 ft to S and W lines; J. A. King 2, same sur, 450 ft to E and 405 ft to S line. Milham Corp. of Texas, Travis Bldg., San Antonio, W. G. Webb 1, 586 TE&L sur, 450 ft to S and E lines. Graham & Lash, Moran, J. T. Cockrell 14, sec 15, LAL sur, 300 ft W No. 13. H. N. Chapman, Waxahachie, F. W. Alexander 5, sec 15, LAL sur, 300 ft N No. 3. W. R. Loggie, Albany, M. Blach 7, 501 TE&L sur, 150 ft to N and W lines. C. H. Half, Albany, C. F. Brown 6, sec 67, LAL sur, 450 ft to N and E lines. Milham Corp. of Texas, Travis Bldg., San Antonio, L. Claussell 9, 582 TE&L sur, 750 ft to SW and 1350 ft to SE line.

Stephens County—Humble Oil & Ref. Co., Houston, J. W. Smith 5, sec 77, T&P Ry sur, 254 ft to N and 2404 ft to W line; 6, same sur, 502 ft W No. 5. States Oil Corp., Eastland, C. E. Sikes 3, blk 6, T&P Ry sur, 575 ft to N and 200 ft to E line. W. W. McDonald et al, Amer. Exch. Nat. Bank Bldg., Dallas, G. Thomas 3, 1125 TE&L sur, 330 ft to S and E lines.

Scurry County—Carey & Lockhart, Colorado, H. S. Newman 1, sec 115, H&TC Ry sur, 330 ft to N and E lines.

Upton County—Dixie Oil Co., San Angelo, A. S. Burleson 1, sec 100, T. J. Jones sur, 160 ft to E and 160 ft to SW line.

Wichita County—Bullington, Lee & Pendleton, Wichita Falls, G. Jennings 13, sec 12, HT&B Ry sur, 70 ft E No. 7, S. I. McCracken, Delphyne Bldg., Wichita Falls, S. A. Waite 2, BBB&C Ry sur, 350 ft E No. 1 G. W. Cooper, Staley Bldg., Wichita Falls, L. Morgan 4, blk 818, E. Stanley sur, 50 ft W No. 4. L. B. Mitchell et al, Waggoner Bldg., Wichita Falls, Waggoner Bros. 1, sec 9, M. A. Willis sur, 150 ft to W and 878 ft to S line. W. A. Patterson, F&M Bank Bldg., Fort Worth, L. P. Douglas 2, sec 15, H&GN Ry sur, 150 ft to W in center of line. Kemp-Munger-Allen Oil Co., Wichita Falls, H. M. Munger 25, blk 30, W. V. F. L. sur, 200 ft to N and E lines. W. J. Moran, Box 1477, Wichita Falls, F. P. Warren 5, Kyler sur, 350 ft N No. 2. Staley & Wynne, Staley Bldg., Wichita Falls, H. Willis 2, BBB&C Ry sur, 300 ft N No. 8. Texhoma Oil & Ref. Co., Wichita Falls, J. H. Bentley 2, Col. Tap. sur, 150 ft to S and E lines. J. W. Duncan, First Nat. Bank Bldg., Wichita Falls, J. E. Parker 1, blk 12, PPCSL sur, 150 ft to S and W lines. Harry Jaffe, Wichita Falls, T. F. Mitchell 9, CT Ry sur, 150 ft to N and 750 ft to E line; 10, same sur, 450 ft to N and 830 ft to W line. Pet. Prod. Co., City Nat. Bank Bldg., Wichita Falls, H. Willis 7, BBB &C Ry sur, 672 ft S No. 4; T. P. Roberts 5, L. Powell sur, 150 ft to NW and 326 ft to E line. Eureka Prod. Co., City Nat. Bank Bldg., Wichita Falls, W. T. Waggoner 10, sec 4, GC &SF Ry sur, 900 ft SW No. 12. Gulf Prod. Co., Fort Worth, Electra Tank Farm 5, sec 23, H&GN Ry sur, 400 ft S No. 4. M. L. V. Smith, Box 1082, Vernon, B. Roediger A-1, CT Ry sur, 150 ft to S and E lines. M. L. Underwood Drlg. Co., Harvey-Snider Bldg., Wichita Falls, Fassett & Tuttle 1, blk 29, CSL sur, 150 ft to S and W lines. R. R. Clark, 2001 Lucille St., Wichita Falls, W. H. Chilsen 6, sec 7, DCSL sur, 300 ft to N and W lines. Johnson & Schulz, Staley Bldg., Wichita Falls, J. C. Mitchell 1, L. M. Collins sur, 750 ft to S and 150 ft to E line. Hugh Jones, Box 177, Burkburnett, J. W. Donoghue 1, J. W. Robertson sur, 200 ft to W and 150 ft to N line. Plummer & Davis, 2003 Lucille St., Wichita Falls, J. E. Roller 3, Holloway sur, 750 ft to E and 150 ft to S line.

Wilbarger County—Landreth Prod. Corp., Vernon, W. T. Waggoner A-1, sec 8, blk 5, H&TC Ry sur, 200 ft to S and W lines; W. T. Waggoner M-2, sec 47, blk 2, same sur, 211 ft to E and 197 ft to S line; W. T. Waggoner F-5, sec 46, blk 4, same sur, 220 ft to S and W lines; W. T. Waggoner CC-2, sec 42, same sur, 150 ft to S and W lines. Atlantic Oil Prod. Co., Magnolia Bldg., Dallas, W. T. Waggoner 3, sec 51, H&TC Ry sur, 567 ft W No. 1; 4, same sur, 360 ft N No. 2. Barkley & Meadows, Wichita Falls, W. H. Stephens 10, sec 83, H&TC Ry sur, 167 ft E No. 3; 11, same sur, 127 ft S No. 5. Staley & Wynne, Staley Bldg., Wichita Falls, W. H. Stephens 13, sec 83, H&TC Ry sur, 50 ft E No. 3.

Williamson County—P B Oil Co., Mercantile Bank Bldg., Dallas, A. Young 1, M. de Villa sur, 150 ft to S and E lines.

Webb County—Crown Central Pet. Corp., Houston, A. M. Bruni 4, blk 14, A. de Arriba sur, 150 ft to N and 336 ft to W line; 5, same sur, 300 ft S No. 3; 6, same sur, 416 ft E No. 4.

Young County—J. M. Thrasher et al, Elks Club Bldg., Fort Worth, E. L. Graham 1, 191 TE&L sur, 150 ft to W and 583 ft to S line. Carey & Booth, Olney, W. Graham 1, 402 TE&L sur, 150 ft to E and 450 ft to S line. A. W. Kay, Graham, E. Eichelberger 1, 1472 TE&L sur, 150 ft to N and E lines. Davis-Hart Co., Harvey-Snider Bldg., Wichita Falls, L. R. Wainscott 1, 1590 TE&L sur, 150 ft to N and W lines. CG&C Oil Co., Ward Bldg., Wichita Falls, W. F. Keathley B-2, 153 TE&L, 300 ft to N and 150 ft to E line; B-3, same sur, 450 ft S No. 2. Texas Co., Wichita Falls, G. M. Boren 5, R. Newman sur. 900 Oil Co., Burkburnett, Benson 6, 1398 TE&L sur, 300 ft SE No. 1 Reed & Anderson, Olney, L. F. Gragg 1, 201 TE&L sur, 1350 ft to N and 900 ft to E line.

S E R V I C E

BETTER MATERIALS

FACT No. 2

HEADS and Joints of the perfected Spengler Core Drill are made from the best grade of nickel steel and heat treated to give maximum strength.

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THE ROBT. R. BERRY CO., LOS ANGELES, CALIF.

R E S U L T S

Link-Belt Crawler Catalog

A catalog has recently been issued by the Link-Belt Company, describing the All-Purpose Crawler. The book contains 48 pages, generously illustrated to show the use of the drag-line, dipper and trench shovel, skimmer, scoop, hook blocks and pile drivers.

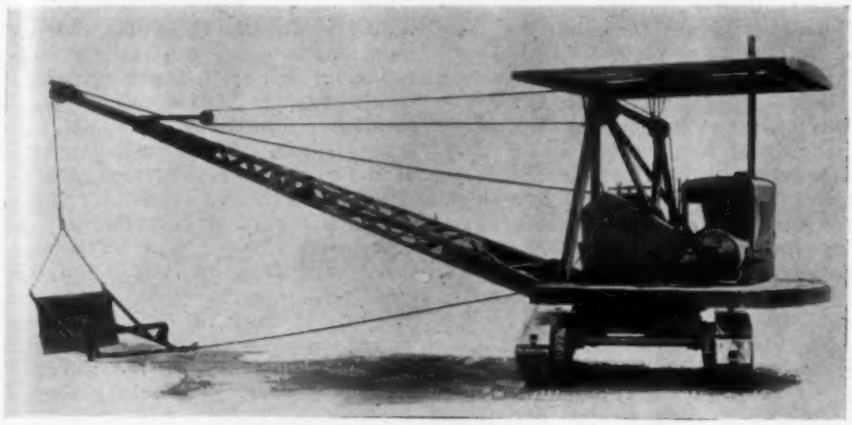
Data on lifting capacities, approximate operating speeds, line pull, tractive effort, etc., are given. The tables in which this information is arranged have been supplemented by line drawings which show dimensions for operating limits.

Copies of this book will be mailed upon request to the Link-Belt Company, 910 S. Michigan Ave., Chicago, asking for catalog No. 895.

Pipe Threading Machinery

Catalog H, describing "Toledo" pipe threading machinery, is just off the press and is being distributed by The Toledo Pipe Threading Machine Company, Toledo, Ohio. Copies may be had upon application to the company.

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS



Buckeye Utility Back-Filler

Buckeye Back-Filler Has Wide Range of Usefulness

Buckeye Traction Ditcher Company, Findlay, Ohio, has added to its line of ditching equipment, a back-filler, characterized by its extended range of usefulness.

The full circle swing permits a "reachability" unusual for this type of equipment. It is readily adaptable to other duties about the job, such as loading or unloading pipe from trucks, lowering them into place or, with a clam shell bucket, for handling materials. At the conclusion of the job, too, it is used for "cleaning up."

The revolving base consists of a heavily ribbed solid electric steel casting. This provides a rigid foundation for the power unit and the main machine assembly. Embodied in the base are steel annealled rollers operating on the machined face of the ring gear. The roller path is four feet in diameter and the rotating drive is through cup-and-cone reversing clutch controlled by a hand lever at the operator's platform.

The boom is of standard lattice type construction, 10 inches by 12 inches square at the center. The full boom length is 29 feet with an added four feet adjustable box channel extension, which gives a maximum boom length of 33 feet. A unique feature of this unit is an 8-foot removable center section which permits a short boom length of 21 feet. The elevation of the boom is controlled by power through a worm-and-gear mechanism.

Full-length Alligator traction is provided. Electric cast steel treads are used, each 13 inches wide. Wheels are six feet eight inches long center to center of drive, sprockets with a bearing area of approximately 15 square feet. Steering is through independent clutches with automatic brakes controlled from the operator's platform. Road gauge is 58 inches between wheels or six feet outside the treads.

The road speed is approximately 1¾ miles per hour. The motor is a 4-cylinder, heavy tractor type, unit rated at 38 H.P. at 1200 r.p.m. Power take-off is through Twin Disc enclosed reduction unit and Twin Disc clutch. The vacuum system of fuel feed is employed.

All gears are cast steel with machine-cut teeth, heat-treated. Spur gear drives only are used in reversing operations. Shafting subject to the heavy loads of 1½-inch nickel chrome steel. For crane work safe-load capacity is 45,000 foot pounds or 3000 pounds at 15-foot radius and 1500 pounds at 30-foot radius. Standard equipment includes an all steel filling and dumping scraper 48 inches wide with cutters and rooters.

More information will be supplied by the company on request.

Oil and Gas Separator Fits in Bottom of Hole

An oil and gas separator said to separate the oil from the gas at the bottom of the hole, is being marketed by The Burns Tool Company, Okmulgee, Oklahoma, under the name of the Carnes Oil and Gas Separator.

This separator is installed in the well below the working barrel and is said to have a number of advantages.

By keeping the gas out of the barrel and tubing the valve is enabled to work in a more efficient manner and production is increased.

It is said, also, that by separating the gas from the fluid in the well, "pockets" are avoided and the tubing can be kept filled with fluid, thus doing away with the racing of the engine and the vibration of rods.

As the fluid enters the Carnes Oil and Gas Separator from the top, most of the sand settles out, and as the gas is kept out, it does not have a chance to keep the oil stirred up, consequently cups last longer and pulling expense is reduced.

Because it takes out the gas before the fluid enters the tubing, this separator is said to eliminate cut oil.

Additional information will be supplied by the Burns Tool Company, Okmulgee, Oklahoma.

Foamite Mixing Chamber Has Gas-Tight Diaphragm

To prevent the accumulation of condensate which has been noticed in their Series "A" open-mouth Foamite Mixing Chambers, the Foamite-Childs Corporation, Utica, New York, is announcing a new vapor-proof type mixing chamber, to be known as Series "B".

This series of mixing chambers has a gas-tight diaphragm across the mouth to block off the vapors from entering the chamber. This diaphragm can be easily and quickly replaced without disturbing either the flashing or the bolts securing the chamber to the tank. Control valves are operated in the usual way.

The chamber itself is built to withstand the strains to which it is subjected in service.

Another improvement over the "A" chambers, is the new removable feature of the bottom which permits easy inspection and painting of the interior.

More information will be furnished by the company, upon application.

Foamite Series "B" Mixing Chamber

It's a Wilson

Try Them

Wilson

Two-Step Spring-Latch Tubing Tongs

Ask for Catalog

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Save Oil

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Try a String at Our Risk

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Mexia, Texas

PEERLESS SUPPLY CO., Distributors for Oklahoma and Kansas, P. O. Box 1780, Tulsa, Oklahoma

Patented Nov. 3, 1925

Logging Wells—Rotary Method

(*Continued from page 46*)

tools or the rotary, although the cost of wells is always the governing factor in the choice of tools, or at least, should be. If standard tools could handle all formations with equal facility and at as low cost as the rotary, there would be no rotaries operating. But, due to the use of less casing required in formations that bear high pressure gas, water, and that cave, the rotary will make holes more cheaply in such formations. No definite method of gauging a district as to the tools most applicable has yet been placed into use, except cost. The extremes, in wells, might be illustrated by the rocks of Pennsylvania, that would not yield commercially to the rotary, and no operator would think of taking a rotary drilling rig to that district, and the soft formations of the Gulf Coast that require a hole full of slush to keep it from caving, and no operator would think of taking a string of standard tools to such district, for no deep hole has ever been completed on the Gulf Coast with anything but the rotary.

And, as the rotary has progressed solely through its reduction in the cost of wells, the writer believes it is with us to stay and that, even though it has some faults left, most of its limitations have been removed in the past few years, and it is now a reliable method of drilling for oil, to first find it, and then to develop the field after it is found.

The mechanical properties of formations must be known to shut off upper waters, to prevent going into lower waters, to secure tight casing shoe seats, to fish properly, to shut off upper gas and, while coring reveals these perfectly, cuttings and observations of the rotary driller can furnish information of the required kind for all operations in drilling for and producing oil.

Cuttings

Cuttings have taken on new importance and usefulness for, in addition to furnishing information as to the mechanical properties of the formation, they bring up contained microscopic fossils, termed foraminifera by paleontologists, and by classifying these into genera, a formation can be placed into its correct geological horizon, and determination of displacement can be made from this, if displacement exists.

Consequently, cuttings samples must be taken with close reference to depth.

The average specimen of cuttings, from the cutting box or screen, may contain fragments from practically all depths of the hole, mixed in all proportions, and it is difficult for any one but the driller and the experienced to determine just what portion of cuttings came from the bottom and what proportion from above.

There is no one that knows more about a well being drilled than the driller at the brake, for each foot drilled is directly under his observation, and he alone can make the observations that are indispensable to accurate logging. And therefore, designations of formations are of necessity made directly and immediately after such formation is penetrated.

As noted before, each mechanical characteristic of a formation can be differentiated by judgment of the character of drilling, as indicated by the equipment, except color. We expect this of the driller. It could not be expected that this be done by a geologist, resident on the well, for the drilling of wells is a life study and the geological study of wells also a life study.

In The OIL WEEKLY of October 13, 1923, the writer classified formations, mechanically, into two major groups—those that require mixing with water into solution because the cuttings stick together and ball up and cannot be flushed out whole and from which colloidal like solutions are obtained, forming the best drilling slush, and those that, although mixed with water and possibly finely divided, are still in suspension and will settle out readily.

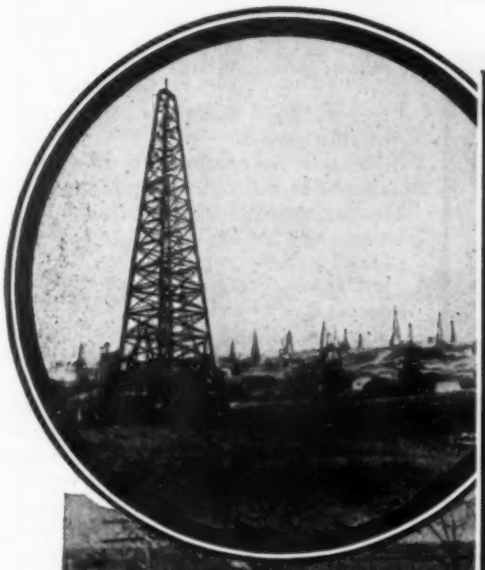
Formations that mix into colloidal-like slush are few; the term gumbo includes all clay that does this; almost all other formations will drill up into finely divided particles that may be held in suspension, but that may be readily separated from water by settling and decanting. In this class is included shales comparable to soft slate, or shales without a sticky binding material, slate, soapstone, loose, packed and hard sand, sand rock, gravel, boulders, flint, chalk, marl, talc, clay, shells and lime shells, gypsum, anhydrite, lime rock, gritty shale, sand and shale, gravel and shale, sand and boulders.

Accumulation of Cuttings

When a well is started, using clear water, the hole is not usually flushed clear of cuttings as fast as dislodged by the bit, and cuttings therefore begin to accumulate in the hole above the bit. And, at any stage of the hole, it is an impossibility to flush the hole clean of all cuttings so that the only cuttings coming out with the slush will be those from bottom, for the reasons to be given.

When a gumbo stratum is encountered, or a stratum that forms thick slush, the well walls are plastered. The well wall takes in water, due to pressure of the mud laden fluid column, and when slush is pressed against the wall with sufficient force to expel water into the formation of the wall, there is deposited on the wall a layer of thick, heavy mud, and with this mud are deposited whatever cuttings that happened to be passing close by.

When water is added to the pit for thinning up, some of the heavy wall



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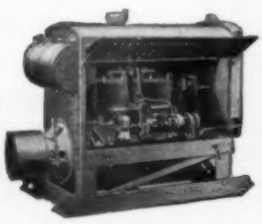

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coating will be flushed off, bringing these old cuttings to the surface, mixing them en route with cuttings from below. An examination of the walls of the well near the surface before surface casing is set gives ample evidence of this.

Hence, every thinning up of the pit should be marked on the log at the formation being drilled, when sample cuttings are being taken and used for identification purposes, so that some explanation may be had of the varying percentages of cuttings. Rain thins up also and should be noted alongside of the formation being drilled at the time.

The presence of accumulated cuttings in the hole at the bottom is disclosed by the core barrel. When coming out of the hole to run core barrel, cuttings settle to bottom of course, in quantity, and the barrel must be washed to bottom, but when cuttings are brought up in the barrel above the core the size of some indicates that they could not be flushed out, hence these were on bottom.

When the drill collar and the joint of pipe immediately above are worn bright, accumulations of cuttings at bottom are also indicated, for the drill collar is usually always centered in the hole by the bit, and cannot rub the well wall. The depth of this accumulation of cuttings is indicated by the distance above the bit that the drill pipe is polished. In a large hole, with comparatively small drill pipe, the drill collar and drill pipe immediately above will emerge with a polish and gleam like new silver.

These cuttings may be fragments, such as hard shales, slate, soft lime rock, soft sand rock, sand, gravel, that are too large and heavy to be flushed out whole, or accumulations of gumbo, that are dug up and then driven around in the hole, and gradually reduced to such size as will allow them to be driven upward. Fragments may be reduced by rubbing contact, or by again passing under the bit, particularly if the bit is not sharp. And still, some of the cuttings may be rubbed and pounded into the well wall by the sides of the bit.

When the velocity of slush is increased, without thinning up, the size of cuttings reaching the surface is increased materially as well as the quantity, but, when thinning up permits the drilling pump to operate faster, due to lesser pressure being required to circulate thin mud, the additional carrying capacity due to higher velocity will be offset by lessened viscosity, and little change is found in the size of fragments.

Of course, some of these observations are possible, and others are made only by inference, with sufficient actualizing at the surface to bear out the inference.

Rat-holing

One practice, used in both prospecting and in proven fields when ap-

proaching a known sand, is to drill a small hole below the hole being carried down, to penetrate formations for the first time with a small hole, so that in the event an oil sand is encountered, a suitable casing seating material will be left in the form of a shoulder above, termed "rat holing." Rat holing is usually done during daylight, and the small hole is reamed down full gauge during the night, leaving the hole ready for the day driller to again feel ahead. This is also termed "double holing."

The quantity of cuttings from the smaller hole below is less per foot of depth, than from the large hole, and more care is necessary to make the proper distinction of cuttings percentages. Although there may be much small hole drilled ahead, the lesser amount of cuttings from this source will be expressed in a lesser percentage.

For example, reducing a hole at 1242 feet from 11-inch to 9-inch, at the top of a sand stratum, the sand showed up at the surface at the proper time in small particles, but did not predominate, by count, until one hundred and ten feet of this sand was drilled. These cuttings were caught on a screen with twenty meshes per inch and washed with clear water.

The depth of hole is a measure of the change of cutting percentages; the same hole, reduced again at 1840 feet, required 174 feet of hard shale to be penetrated before the shale cuttings from this particular stratum predominated.

In many localities there will be predominating colors of cuttings and slush in certain sections of the hole. For a thousand feet, in one locality, the color of cuttings and slush show a light blue, or bluish gray, when they suddenly change into reds, lasting for 900 feet, and then again to yellow. These colors may or may not have significance geologically, but may be used as markers of key beds for subsurface definition.

Velocity of Slush

The size of cuttings flushed to the surface, that are dug up in the form of fragments that do not adhere to one another, or ball up, may be increased by speeding up the pump, slowing down the rotary and digging harder, at any particular time. The increased velocity of slush flushes out a larger percentage of cuttings in slush, which are smaller in average size than those excavated by digging hard, and the larger fragments may thus be distinguished.

When velocity of slush is high, such as obtained when using a large drilling pump, high pressure steam, with 6-inch drill pipe in a relatively small hole, say 9⅞-inches, or four-inch drill pipe in a smaller hole, cuttings are flushed out to the surface in fragments of

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larger size than when velocity is low, as when using four-inch drill pipe in 11-inch or larger hole. The difference in size of cuttings is readily noticeable.

The difference in size of cuttings in a 15-inch hole, in which 10-inch casing is to be set, is very noticeable in a 9⅞-inch hole drilled through the 10-inch, after the 10-inch is set.

When prospecting, or when approaching a known formation or when a formation is to be identified and cuttings saved from it, more representative cuttings can be obtained by stopping the rotary, and circulating slush by running the pump fast until the hole is largely cleared of cuttings, and slush comes up fairly free of cuttings, then running the pump at a slightly lower speed and digging hard, when cuttings from that formation may be identified in the cutting box or on the cutting screen.

But, when the slush is maintained of a uniform weight, the pump maintained at a uniform speed, and cuttings are prevented from passing into the pit and back into the pump suction, cuttings are fairly representative, provided that the size of pump and speed is sufficient to keep the bottom clear of accumulations.

The time required for cuttings to reach the surface varies so much that a fast rule for computing this is not possible, for cuttings do not travel at the same speed as the slush driving them upward. If slush is thin, its carrying capacity is low, both in quantity and in size of fragments, and only the smaller sizes will be flushed out. If slush is heavy, larger sizes and greater quantity will be flushed out, but heavy slush is subject to channelling, and channelling increases the speed, so, when velocity is computed by using the pump delivery and cross sectional area of hole, small cuttings may reach the surface before the computed time, while large cuttings will arrive later.

Channelling occurs when slush travels in a thin stream up one side of the hole, and channelling may be duplicated in the laboratory with a glass tube and a small pipe inside. When channelling, the body of slush does not move upward as a whole.

Velocity is not constant, either of cuttings or of slush and it is manifestly not possible to gauge either, but an approximation may be had by computation.

The term velocity of slush, or velocity when applied to the speed of water in a pipe, is the "mean velocity." Figure No. 1 shows the velocity cross section of a pipe carrying clear water. Due to lesser friction, the central portion travels at a higher rate of speed than the circumferential portions, and, when we say velocity of water in a pipe, we intend to say the average of all velocities found in a stream travelling through a pipe.

The mean velocity is best measured by displacement, or delivery of a cer-

tain quantity per minute. Although velocity may be measured directly, using circular cross sectional equal areas, and taking the mean of all these, we can make such measurement only when the pipe is above ground.

In a hole with the pipe in the center, Figure No. 2, velocities assume the curve shown, and, when the pipe is at one side of the hole, the curve assumes the shape shown in Figure No. 3, quite naturally. The smoother surface of the drill pipe offers less frictional resistance to the travel of slush upward, than the wall of the well.

The capacity of various size drilling pumps is given in an accompanying table, No. 1, in gallons per revolution, based upon a delivery of 75 per cent of displacement. One revolution consists of one stroke back and forth of each piston.

These capacities are based upon inside packed piston pumps, with new liners, new packings carefully inserted, good valves and seats, and leak free suction, when the delivery will approximate the amounts in the table. But, with worn packing, leaky suction, worn valves or seats, the delivery percentage reduces materially, even to zero in poorly maintained pumps.

Table No. 1

Fluid Bore	End Stroke	Gallons per Revolution
4	x 10-inch	1.62
4½	x 10-inch	2.05
5	x 10-inch	2.55
5½	x 10-inch	3.09
6	x 10-inch	3.66
4	x 12-inch	1.96
4½	x 12-inch	2.46
5	x 12-inch	3.06
5½	x 12-inch	3.69
5¾	x 12-inch	4.04
6	x 12-inch	4.41
5	x 14-inch	3.57
5½	x 14-inch	4.32
6	x 14-inch	5.16
6½	x 14-inch	6.06
6¾	x 14-inch	6.51
7	x 14-inch	7.12
6	x 16-inch	5.85
6½	x 16-inch	6.87
7	x 16-inch	7.99
7½	x 16-inch	9.15
7¾	x 16-inch	9.80
8	x 16-inch	11.44

The slip, due to loose packing in a pump can be found by closing the slush outlet valve and opening the steam valve until the pump delivery pressure rises to that being used for drilling, and counting the revolutions per minute, then using this count as a fraction of the revolutions used while drilling with the outlet valve open.

Thus, with a normal pump speed of 50 revolutions per minute and a drilling pressure of 120 pounds at the pump discharge. To generate the same 120 pounds pressure, the pump speed was 9 revolutions per minute with the dis-

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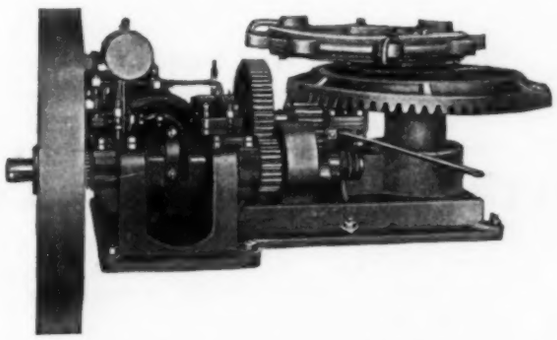

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charge valve closed, hence the slippage loss was 9/50ths or 17.7 per cent, and deducting this from 100 per cent, the volumetric efficiency of the pump was 82.3 per cent.

For more exact work, the writer uses plunger pumps, outside packed, designed especially for drilling, in which any slippage loss is visible and may be eliminated, whereas, the inside packed, piston pump has its slippage on the inside where it is not visible and its percentage is always more or less of a question.

The steam pump will short stroke unless the valves are set exactly and the capacity of steam pumps must be based upon the actual length of stroke. Power driven drilling pumps always make full length stroke and are not subject to this variation.

Wide Ditch Preferable

Every precaution should be taken to prevent cuttings from travelling around the ditch and through the slush pit back to the pump suction, where they may be recirculated down the hole.

A wide ditch will settle out and collect cuttings better than a narrow ditch, for when slush travels slowly, cuttings settle more readily, although, if the ditch is allowed to fill with cuttings or heavy slush, a narrow channel will form and the higher rate of travel down this channel will carry cuttings over into the pit. The ditch should be wide enough and long enough to catch all the cuttings that may be pumped out of the well during one half of the twenty-four hour day.

A large hole and a large drilling pump requires a wider and longer ditch, obviously, than a smaller hole and a smaller drilling pump. Since the amount of cuttings from a hole are proportionate to the square of the diameter of the hole, an 18-inch hole will deliver four times the cuttings per foot of a 9-inch hole, and a ditch for the larger hole would have four times the capacity of that necessary for the smaller. The width and depth of ditch must correspond to the size of drilling pump used.

A division wall of boards across the pit, or two such division walls, prevent cuttings from travelling into the pump suction.

Years ago, slush pits were dug square and deep; today the best practice is a long, comparatively shallow slush pit, excavated with scrapers, for this type of pit permits the finer cuttings to settle out more readily.

Recognition of Oil Shows

An oil showing is easily recognizable on the ditch and on the pit. Even though the pressure of the formation in which oil is found may be lower than the pressure of the mud laden fluid column, digging into the formation and pumping up cuttings will also entrain oil in sufficient quantity to afford easy

recognition, particularly if the oil is light.

The lubricants used for the rotary are heavy, and are not to be mistaken for an oil showing, and neither should the tool lubricant be mistaken, for it is also heavy.

And when a showing of oil or gas appears, the driller will pump out the drilling pit into the reserve pit, thin up the drilling slush materially, flush the hole of heavy slush, by running the pump fast, and then dig heavily for a few feet, or even a few inches, and then pump these to the surface, or immediately run a core barrel to secure a sample of the formation bearing production.

A gas showing, without oil in the formation, is expressed at the surface in the usual bubbles coming up with the slush and, when the showing is large, gas acts as an air lift, with a much greater showing. This is not mistaken for the boiling up out of the hole of slush caused by a caving hole.

Air can be pumped down the drill pipe, though, if the suction pipe is too near the surface of the pit, or if the pump can draw in air through a packing gland or through a leaky suction, although this quantity is usually small.

Just before a gas showing the writer has noticed, many times, the appearance on the ditch of quantities of carbon, of the appearance of soot, that floats out into the pit without absorbing moisture, while other quantities of the same material will color the slush black, and then in a few minutes, after drilling a few feet, the gas showing follows.

Lignite, though, will float on the surface, and when finely ground will color the slush black also and should not be mistaken for the preliminary to a gas showing.

There are some oil bearing formations in which showings of oil are lessened by the pressure of light slush, or water. The writer was recently informed by an operator owning wells in the Peru Sand, the oldest producing sand in Kansas, that when this sand was drilled into with standard tools with a wet hole, its oil and gas content failed to show.

The writer believes that the consistency of mud laden fluid has much to do with showings of oil and gas from a porous zone and that, if the slush is of such consistency as will plaster the wall, instead of entering and filling the pores of the sand and driving the oil and gas back, we have a better chance of not mistaking an oil showing, although the least showing would call for a core.

Those who practice the most modern methods can see that the writer is describing some of the things that were previously faulty with the rotary system; where there is any doubt whatever, now, cuttings, and cores are taken to insure safe drilling.

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Alaska	5	Ecuador	5	Persia	4
Argentina	68	England	39	Peru	9
Australia	5	France	9	Poland	4
Algeria	2	Galicia	2	Porto Rico	1
Austria	2	Germany	6	Roumania	18
Barbados	2	Hawaii	2	Russia	20
British West Indies	12	Holland	6	Spain	1
Canada	53	India	23	Switzerland	3
Canal Zone	8	Japan	5	Syria	1
Colombia	9	Java	2	Scotland	1
Cuba	2	Mexico	192	Venezuela	49
Czechoslovakia	2	New Zealand	1		
Dutch East Indies	14	Palestine	1	Total	588

From A. B. C. Statement, June 30th, 1925.

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LETTERS OF Paul Peebles P.S.G.

mi deer cleopatry

cleo hunny like I told yu in mi last letter it looks like the geeology perfession is kinder blowed up in these parts for a wile on account of they have used so mutch dinnamite workin seesmoregrafts in the gulph coast cuntry that they have found enuff dumes to last them for quite a spell, espeshul as it seems like they hav got sum feelds around hear whitch wont stay ded, like forinstants spindel top whitch has bin almost forgot until recent when she giv bomont anuther wakin up on account of findin sum deepr oil. it is just like I hav sed all along they just hav 2 drill 2 find moar oil around old spindel top. I hav bin sayin that for 20 yeres & ort 2 hav bort me sum leeses over there when I was yunger & helt on to them instid of spendin mi munny free like I hav did. but the way it is hunny I hav always had a ideer that if I was 2 go 2 foolin around with leeses & git ritch I wood not hav time from spendin mi munny 2 atend 2 enny bizness whitch wood be a grate economic waste because it wood be a sin for a grate mine like mine 2 be retired from activ work in the oil bizness. I gess yu no what I meen hunny—I meen that I am a patriotic & wood rather giv the werld the bennyfits of mi remarkable interleck than 2 be ritch. the onliest reesen I wood like 2 be ritch hunny is on account of yu & then we cood git married & mabe liv happy every afterwards. but that is another story, eh hunny.

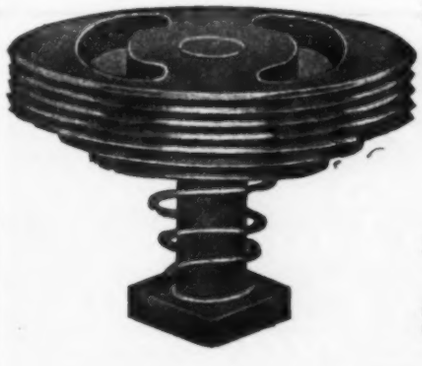
well sinct I figgers that the geeology bizness is goin 2 be kinder slack in these parts & me not wantin 2 leev hear on account of huston is a pretty good town & also pretty clost 2 goose creek & also on the ship chanel wheer sumtimes botes cums in with enuff stuff that when yu bi ennything confidenshual yu can at least kid yoreself in2 bleevin that it is what the label says. on the hole, huston has got sevral advantages & besides I hav consentrated on dumes so that I do not want 2 go foolin around sumwheres elst where mabe I wood not no so mutch about geeology in general like I do when I stay where I no mi stuff. Now dont misunderstand me hunny that I am not a all round geeologist, but what I meen is that I am favorites 2 gulph coast feelds, & besides I have got a pretty good plase 2 bord hear whitch is a advantage on account of a feller kinder gits use 2 a widder after he has borded with her as long as I hav with this 1, & espeshul when she givs yu 2 pares of slippers for crismus & his sweety dont even send him no socks.

but I keep wanderin offen the subjeck whitch was that I was fixin 2 tell yu that I am goin 2 devote mi talents 2 bein a oil feeld engineer for a while. I gess yu do not no what a engineer is hunny escept yu think it is a feller whitch runs a engine on a rale rode or mabe what runs ennykind of a engine & a driller wood be a engineer because he is the chauffer on the rig. well it is kinder like that only difrent because a driller works & a engineer is a feller whitch has got bi that, or mabe he does hav 2 work sumtimes a little but it wood hert the dignity of the skool whitch he cum from if he was ennything elst escept a engineer, it is engineers in evrything, like even yu wood be a dishwashin engineer if yu had bin 2 skule where they taut dishwashin if it is ennyplace like that. anuther way for a man 2 git 2 be a engineer is 2 no moar & hav 2 be pade moar money than his boss, so the boss lets him be a engineer 2 kinder save his face with his wife when she finds out the boss aint gittin the most money & starts in tellin how good he aint.

so sinct I hav did sutch a good job of findin oil feelds & helpin other peeple 2 find them it is now up 2 me 2 show them how 2 git the oil out of the ground, whitch is the job of a oil feeld engineer & also how 2 drill there wells 2 the best advantage whitch I cood do only I hav had sum experentses with drillers whitch kiner holds me back from givin them advist. yu no hunny I hav werked in the feeld when I gotten pade for gittin cussed out bi the drillers, but I dont see no reesen why I shood go back 2 that now when I hav made a name for miself in the geeology bizness & can just as well stay away from drillin wells till they hav 2 be pumped. Of corse I will tell people how 2 drill a well so as 2 make it produce the most, but I want 2 talk 2 the suptendents & let them tell the drillers because they is the ones that hires the drillers & gits a little more regard from them than I wood git. so 2 start off with I am goin 2 consern miself principle with making prolongations of the flow of oil wells after they hav quit flowin on there on accounts whitch is the cheepest way they is 2 git oil out of the ground. natraly I am goin 2 fix up the gulph coast first.

for yu 2 understand what I am talkin about I will hav 2 esplane 2 yu what makes a oil well flow, whitch yu bein a woman yu will not no nuthin about. bu yu do no about sodypop whitch werks on the same principle. it is the gas in the likyid whitch givs its ambishun, I meen sodypop & oil, but it is other likwids whitch has got a difrent & moar insistent ambishun whitch it can exert in a intirely difrent matter whitch is of no moment hear & is only menshuned in passin that yu can no that I am up on them matters. well when I was a kid I uster fill up sody tanks for the drug stoar when we put watter in & then terned in sum gas 2 make it bubble whitch is kinder old fashun now but is the rite prinsipal yet. well if yu can put gas in watter like that yu can also put gas in oil, so that is what I am goin 2 do 2 make sum of these old wells around hear flow.

well mi skeem will be a combinashun of the pracktis of shootin wells with nitro & the gas principle, only I no what I am doin & the fellers whitch shoots wells dont. they think they git the oil bi bustin up the formashuns, but what it does is bust up the oil so some of it makes gass like in a crackin still & that gasses the oil & makes



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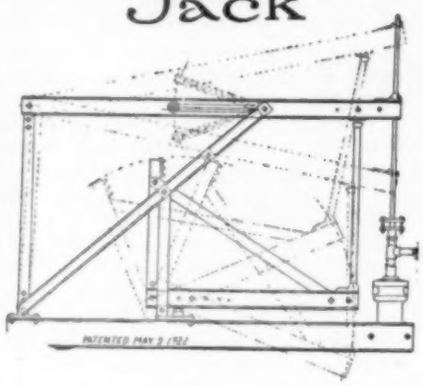

A Straight Up-and-Down Pumping Stroke

The Jensen Jack

gives this and at the same time lessens wear on the polish rod and stuffing box.

Increased production naturally results while operating costs are reduced.

Jack sold complete or only the frame, which can be installed on any well giving a straight-lift jack.

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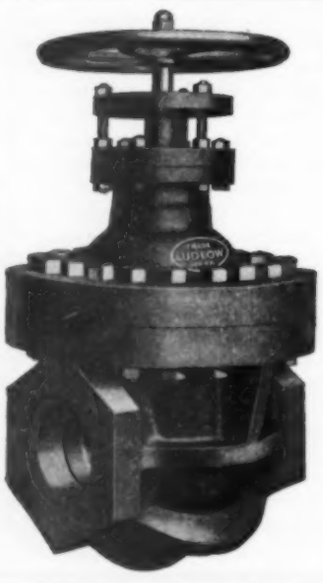

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Discriminating valve buyers realize that quality and dependable service are far more important than a low initial cost.

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it ambishus 2 move about. now in the gulph coast the sand wont stand for no foolishness like that because the sand just cushuns the shot. so what I am goin 2 do is giv the well a shot of carbide like we uster make lights on fords out of. the oil bein in emulshun with watter will help along the skeem, in place of givin the well a shot of nitro I will jest put in a few pounds of carbide & let her generate the gas whitch will make the oil flow out.

mabe I will hav 2 patent me a speshul kind of slow actin carbide whitch will generate slower than ordinary so that it wont all come out at onest like it mite want 2 do, but they hav figgered that out bi crackin gasleen so she dont bern up so fast all at onst & if they can do that with gasleen well I gess it can be did with oil.

hunny if this skeem werks it ort 2 make me ritch & I do not see no reesen why it shood not werk fine because it shore is reesenable that yu can put stuff in oil 2 make it bubble like if yu put east cakes in home brew or even if yu put sody in vinnerger, whitch gives me a ideer that if I cood find sum oil well that had soddy watter in plase of salt watter in it I cood make her flow bi puttin vinnerger. but I gess I invenshun at a time ort 2 do till I git reely started in the oil feeld engineer bizness.

yore lovin paul

ps anuther evidents that the geeology bizness is kinder blowed up is that I seen the other day where a dog finded a well up in oklehomer, us geologists hav bin jokinly referred 2 as rock hounds for a long time, but now a reel hound is findin oil, good nite. pp

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When the colored couple were being married and the clergyman read the words, love, honor and obey," the bridegroom interrupted:

"Read dat ag'in, parson; read dat oncet mo', so's de lady kin kitch de full solemnity of de meanin'. Ise been married befo'."

Competent refiner, with knowledge of the running of Eastern, Western and Southern crudes and various cracking plants, is desirous of connecting with a progressive company. Now employed but wants to advance." Box 263, care OIL WEEKLY.

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SQUEAKS FROM THE BULL WHEEL

Convenient and Ornate

An English lady of title, who was suffering from a nervous breakdown, having been recommended to stay in a certain small German village in the mountains, went there to enquire about lodgings, and knowing no German secured the assistance of the local schoolmaster, who had a smattering of English. Having secured what she wanted, on her return home to make all the arrangements, she remembered that she had omitted to enquire if there was a "W. C." attached to the house. She wrote therefore to the schoolmaster for full particulars as to the "W. C.," but as he had never heard of the abbreviation, and therefore did not understand its meaning, he consulted the local pastor, who also knew a little English. He came to the conclusion that the lady was a devout churchgoer, and wished to know where the "Wald Chappelle" (Chapel in the Wood) was situated, and so wrote the following letter:—

"Your Ladyship:—

"The 'W. C.' is located about half a mile from your lodgings in the center of a pine forest, amidst lovely surroundings. It is open Tuesdays, Thursdays and Fridays, and as there are many visitors during the summer I advise you to go early. The accommodation is good, and there are 80 seats, but should you at any time be late, there is plenty of standing room. The bell will be rung 10 minutes before the 'W. C.' is opened. I would especially advise your ladyship to pay a visit on Tuesdays as on that day there is an organ accompaniment. The accoustics on the premises are excellent, even the most delicate sounds being audible.

"I shall be delighted to reserve the best seat for your ladyship, and have the honour to be etc., etc."

When the coyote howls at midnight,
With that eerie howl of his,
Then the weather either changes—
Or remains just as it is.
—R. F., in Midwest Review.

It's easy enough to be pleasant
When your foot runs into a nail,
But the man worth while
Is the man who can smile
When his wife reads his personal mail.

"Have you ever met a man whose touch seemed to thrill every fiber of your body?"

"Yes, once."

"Ah! and who was he?"

"The dentist."

A city and a chorus girl
Are much alike, 'tis true;
A city's built with outskirts,
A chorus girl is too!

City Feller—"Say! Is that bull safe?"

Rustic—"Well, he's a dang site safer'n you are!"

Joshua Kornshux, of Scrabble Corners, was paying a visit to the city and while there ran into a fellow townsman.

"And how do you like the city, Josh?" he was asked.

"I dunno," was the dismal reply. "My wife's along."

A colored bell hop of a certain hotel was teaching another the tricks of the profession, and emphasized among other things the necessity for courtesy and tact.

"Cortsy and tak, you all say. What am de difference of dem two wurds?" asked the student B. H.

"There am considerable difference, niggar. The other mornin' Ah opens a door what proves to be a bathroom and in de tub was a lady. I shut dat door instantanious and then said, "Excuse me, sah!" Now "Excuse me" was cortsy, but includin' dat "sah" was "tak."

"Any part of the city for fifty cents!" yelled the taxi driver.

"You can't sting me again," replied Silas. "I bought the city hall last year, and they wouldn't give it to me."

"Watch me take a rise out of him," said the smart young man as a tramp approached.

"That's the same story you told me last time you accosted me," he said, when the vagabond had finished his tale of woe.

"Is it?" was the answering question. "When did I tell it to you?"

"Last week."

"Mebbe I did, mebbe I didn't," admitted the tramp. "I'd almost forgotten meeting you. I was in jail all last week."

Whatever trouble Adam had,
No man in days of yore
Could say when he had told a joke;
"I've heard that one before."

"I say, Humphry, do you think a barber has any excuse for scraping up acquaintances?"

"Ah, yes, indeedie! But he has no excuse for cutting them."

"Leah is almost foolish at times."

"Ah, what now?"

"Oh, yesterday she put a special delivery stamp on a letter and then gave it to her husband to mail."

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Write for prices and maps. Will allow time for geological inspection.

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Reference: Mercantile Agencies

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Baash-Ross Tool Co.
Continental Supply Company
LeBus Rotary Tool Works

Packers—
Continental Supply Company
The Guiberson Corp.
Larkin & Co.
Layne & Bowler
Robinson Packer Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.

Packing—
Continental Supply Company
D. F. Connolly Agency
Gustin Bacon Manufacturing Co.
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.

Paints—
Continental Supply Company
Eclipse Paint & Mfg. Co.
Peden Iron & Steel Co.
Sullivan Company
Tnemec Paint & Oil Co.

Panel Boards—
General Electric Co.
Westinghouse Elec. & Mfg. Co.

Patents—
Hardway & Cathey
Lancaster & Allwine
Jack A. Schley
Jesse R. Stone

Perforated Casing—
Kobe, Inc.

Pipe—
A. M. Byers Co.
Central Tube Co.
Continental Supply Company
Frick-Reid Supply Co.
Harrisburg Pipe & Pipe Bending Co.
Hercules Supply Co.
International Supply Co.
National Tube Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Republic Supply Co.
South Chester Tube Company
Superior Tube Company
Youngstown Sheet & Tube Co.

Pipe Cleaning Machines—
W-K-M Company

Pipe Grips—
Continental Supply Company

Pipe Insulation—
Johns-Manville, Inc.

Pipe Screwnig Machines—
Buckeye Traction Ditcher Co.

Pipe Threading Machines—
Jarecki Mfg. Company
Landis Machine Co.
Standard Engineering Co.
Williams Tool Corporation

Pipe Vises—
J. H. Williams & Co.

Pipe Wrenches—
Continental Supply Company
Dunn Mfg. Co.
The Guiberson Corp.
Trimont Mfg. Co.
LeBus Rotary Tool Works
Republic Supply Co.
J. H. Williams & Co.
Wickwire Spencer Steel Corp.

Plumb Bobs and Seats—
Sargent Engineering Corp.

Portable Buildings—
Butler Manufacturing Co.
International Derrick & Equipment Co.

Portable Drilling Rigs—
Bridgeport Machinery Co.
Continental Supply Company
Lee C Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.
The National Supply Cos.
Waukesha Motor Company

Portable Compressors—
Continental Supply Company
Sullivan Machinery Co.

Pulleys—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Pulling Machines—
Clark Machine Co.
Coneinental Supply Company
Iron King Mfg. Co.

Pull Rods—
Sheffield Steel Corp.

Pumps—
Axelson Machine Co.
Continental Supply Company
D & B Pump & Supply Co.
C. C. Fetty
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Manufacturing Co.
Jarecki Manufacturing Co.
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Northrup Equipment Company
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.
Waukesha Motor Co.

Pumping Engines—
C. F. Camp Co.
McIntosh & Seymour Corp.

Pumping Equipment—
General Electric Company
Northrup Equipment Company
Shaffer Specialty Co.

Pumping Powers—
American Well Works Co.
Continental Supply Company
C. C. Fetty
Frick-Reid Supply Co.
International Supply Co.
Jarecki Mfg. Co.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Mfg. Co.
Spence Machine Co.

Regulators—
Westcott & Greis

Refined Products—
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Sinclair Refining Co.
The Texas Co.

Recorders—
Fort Worth Laboratories

Refinery Equipment—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
Oil Conservation Engineering Co.
Petroleum Iron Works Co., The
Republic Supply Co.
Smith Separator Co.
Titusville Iron Works
United Iron Works, Inc.
Westcott & Greis
Wyatt Metal & Boiler Works

Rig Irons—
Continental Supply Co.
International Supply Co.
Lee C. Moore & Co., Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Co.

Rope Socket Metal—
Eagle Picher Lead Co.

Rotaries—
International Supply Co.

Rotary Fish Tail Bits—
Continental Supply Company
Multi-Cutr Rotary Bit Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.

Rotary Rock Bits—
Continental Supply Company
Hughes Tool Co.
Reed Roller Bit Co.

Rotary Tools—
Federal Supply Company

Safety Casing Clamps—
Shaffer Specialty Company

Sand Pumps—
Larkin & Co.

Sand Reel Supports—
Shaffer Specialty Co.

Screen Casing—
Kobe, Inc.

Separators—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
Lorraine Corp.
M & V Tank Co.
Smith Separator Co.
Trumble Gas Trap Co.

Specialty Manufacturers—
Shaffer Specialty Co.

Steel, Alloy—
Andrews Steel Co.
Central Steel Co.
Ludlum Steel Co.

Steel Bull Wheels—
Bradford Rig & Reel Co.
McIntosh & Seymour Corp.

Steel Derricks—
Continental Supply Company
Emsco Steel Products Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Crown Blocks—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Storage Tanks—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
Petroleum Iron Works Co., The

Still Covering—
Johns-Manville, Inc.

Strainers—
Continental Supply Company
Emsco Steel Products Co.
Howard Smith Company
Kobe, Inc.
Layne & Bowler Co.
J. H. McEvoy & Co.
Pelican Well Tool & Supply Co.

Special Steels—
Central Steel Co.

Steel Tanks—
Bradford Rig & Reel Co.

Structural Steel—
Butler Mfg. Co.
United Iron Works, Inc.

Sucker Rod Lines—
Continental Supply Company

Sucker Rod Elevators—
The Cunningham Co.

Sucker Rod Hangers—
Lorraine Corp.
Robinson Tool Co.

Sucker Rod Hooks—
The Cunningham Co.

Sucker Rod Rotors—
Sargent Engineering Corp.

Sucker Rod Sockets—
Baird Supply Co.
Brown Welding & Machine Co.
Continental Supply Company
The Cunningham Co.
Federal Supply Company
Shaffer Specialty Co.
Western Supply Co.

Sucker Rods—
Axelson Machine Co.
Continental Supply Company
Columbus Sucker Rod Co.
D & B Pump & Supply Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Co.
Kansas City Bolt & Nut Co.
Oil Well Supply Co.
J. P. Ratizan
Republic Supply Co.
Sheffield Steel Corp.

Swabs—
Continental Supply Company
The Cunningham Co.
Shaffer Specialty Co.

Swing Joints—
General Machine Works
Oil Conservation Engineering Co.
Westcott & Greis

Tank Bolts—
Continental Supply Company
Sheffield Steel Corp.

Tanks—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
The Brownell Co.
Kansas City Struct. Steel Co.
Maloney Tank Co.
M & V Tank Co.
Panhandle Refining Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works Co., The
United Iron Works
Wyatt Metal & Boiler Works

Tank Deadwood—
Robertson-McDonald Lumber Co.

Tank Equipment—
Continental Supply Company
Johns-Manville, Inc.
Oil Conservation Engineering Co.
Parkersburg Rig & Reel Co.
Westcott & Greis

Tank Insulation—
Johns-Manville, Inc.

Tank Roofs—
Johns-Manville, Inc.

Temper Screws—
Burns Tool Co.

Thermometers—
Continental Supply Company
Fort Worth Laboratories

Timbers—
Robertson-McDonald Lumber Co.

Tongs—
Bridgeport Machine Co.
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corporation
Howard Smith Company
LeBus Rotary Tool Works
Pelican Well Tool & Supply Co.
J. H. Williams & Co.
Wilson & Willard Mfg. Co.

Tool Joints—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Continental Supply Company
Emsco Steel Products Co.
Hughes Tool Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.

Tools (Fishing and Drilling)—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Brown Welding & Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
Houston Engineers, Inc.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Spang & Co.
Star Drilling Machine Co.
Sullivan Machinery Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
C. F. Camp Co.
Rock Island Plow Co.

Traveling Blocks—
Baash-Ross Tool Co.
Continental Supply Company
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tret-O-Lite—
W. S. Barnickel & Co.

Trucks—
Wichita Falls Moter Co.

Tubing Catcher—
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corporation

Tubing Lines—
Continental Supply Company

Tubing Protectors—
Mexia Planing Mill Co.

Tubing—
Continental Supply Company
Central Tube Co.
National Tube Co.
Republic Supply Co.
Reading Iron Co.
South Chester Tube Company

Underreamers—
Bridgeport Machine Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Continental Supply Company
Sullivan Machinery Co.

Valves—
Continental Supply Company
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Ludlow Valve Mfg. Co.
The Lunkenheimer Company
Norris Bros.
Northrup Equipment Company
Smith Separator Co.
Sour Lake Machine Co.
Southern Brass Mfg. & Plating Company
Texas Oil Pump Co.
Westcott Valve Mfg. Co.

Valves, Gate—
The Lunkenheimer Company

Valves and Fittings—
Continental Supply Company
Darling Valve & Mfg. Co.
D & B Pump & Supply Co.
Hercules Supply Co.
Jarecki Mfg. Co.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The Lunkenheimer Company
The National Supply Cos.
Peden Iron & Steel Co.
Pittsburgh Reinforced Brading & Machine Co.
Republic Supply Co.
United Iron Works

Vapor Tight Insulated Tank Tops—
Johns-Manville, Inc.

Vents—
Westcott & Greis
Oil Conservation Engineering Co.

Walking Beams—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Welding and Cutting Equipment—
Continental Supply Company

Working Barrels—
Axelson Machine Co.
Continental Supply Co.
D & B Pump & Supply Co.
Howard Smith Company
Northrup Equipment Company
Republic Supply Co.
The Charles N. Hough Mfg. Co.
Southern Brass Mfg. & Plating Company
Texas Oil Pump Company

Water Gauges—
Continental Supply Company
J. E. Shaffer Company
Smith Separator Co.

Water Cans—
Continental Supply Company
H. P. Gott Mfg. Co.

Water Softening Compounds—
Ward Chemical Co.

Wire Rope—
American Cable Co.
Bridgeport Machine Co.
Continental Supply Company
Hercules Supply Co.
International Supply Co.
The Longhart Supply Company
Regan Forge & Engineering Co.
Republic Supply Co.
The National Supply Cos.
Wickwire Spencer Steel Corp.
Williamsport Wire Rope Co.

Wire Rope Fittings—
American Cable Co.

Wire Rope Slings—
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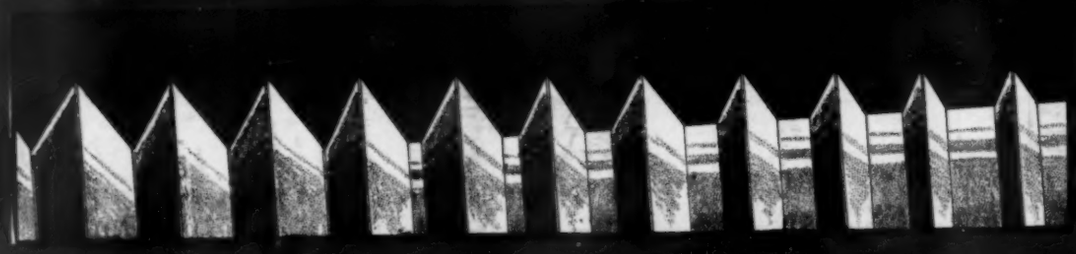

On the Axelson vanishing thread the root of the thread tapers forward giving full depth at the pin end and gradually to the pin at the point where the greatest stress occurs!
Patent pending.

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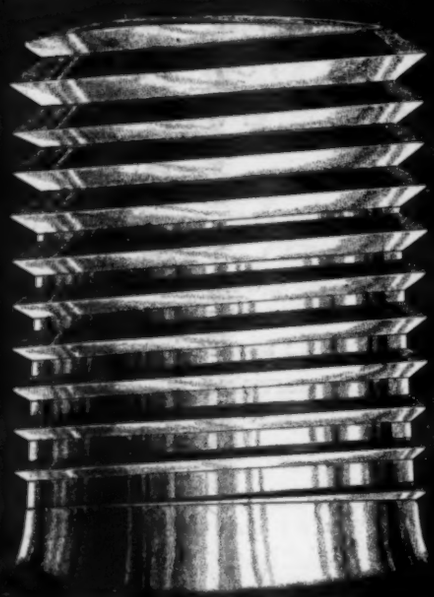

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